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### SOME PIONEER MEDICAL WOMEN OF THE UNIVERSITY OF SYDNEY.<sup>1</sup>

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Sydney.

By a happy coincidence, this year, in which we are commemorating some pioneer medical women of the University of Sydney, is the hundredth anniversary of the first appearance of a woman's name in the register of medical practitioners in England. The name was that of Elizabeth Blackwell, an Englishwoman who although a graduate of an American university became eligible for registration in England under a special clause of the recently passed *Medical Act*. Dr. Blackwell was visiting England in 1858 with the intention of assisting in a movement to give opportunities of training to women, and opportunities of using such training when acquired. One of the weapons she used in her campaign was the delivery of three lectures entitled "Medicine as a Profession for Ladies". A member of her audience was a young woman of twenty-three who as Dr. Elizabeth Garrett Anderson was to become the most famous pioneer among British medical women.

It is hardly possible to speak of any British group of pioneer medical women without a passing reference to

Dr. Garrett Anderson, Dr. Sophia Jex-Blake and their colleagues, so great is the debt owed to them by all medical women. And to appreciate the magnitude of the debt it is necessary to reflect for a moment on the conditions of women in England when this group graduated. Secondary education for women was almost unknown. Daughters who did not marry were expected to live at home, and to occupy themselves with such feminine activities as needlework and painting. To be practically idle was regarded as a sign of gentility. With the death of their parents these women frequently found themselves in financial difficulties without the training to enable them to earn even a meagre living. These were the women who composed the tragic group known as distressed gentlewomen, and in the years after the Napoleonic wars their position was tragic indeed. It was to improve their lot, and to protect girls from the necessity of joining their ranks, that a group of women, among whom was Elizabeth Blackwell, began a movement to establish schools and colleges for girls and to find new occupations for women. The prevailing opinion was that women were untrainable except for household duties and the care of children; it is even recorded that one hairdresser, on being asked if it were possible to employ women in his trade, replied in a tone of shocked surprise: "Oh no, Madam. Why, it took me a fortnight to learn the trade!" Gradually, however, enterprise and belief in their cause won victory for the group of women who were so concerned with the lot of their less fortunate sisters, and the achievements of such women as Florence Nightingale, Elizabeth Garrett Anderson and Sophia Jex-

<sup>1</sup>The Post-Graduate Oration of the Post-Graduate Committee in Medicine in the University of Sydney, delivered on May 14, 1958, at the University of Sydney.

Blake contributed greatly to the ultimate success of their scheme.

Details of the battle that Dr. Garrett Anderson and Sophia Jex-Blake waged in an attempt to become qualified medical practitioners are well known—the difficulty of obtaining teaching in the preliminary science subjects, of being admitted to lectures on medical subjects, of gaining admission to hospital wards, of being accepted as candidates by any examining body—but the story of Dr. Anderson's struggle with the British Medical Association may come as a surprise to those who know what the support of this Association has meant to medical women in Sydney.

Dr. Garrett Anderson was elected a member of a small branch of the British Medical Association in 1873, and her election remained unnoticed by the main body of the Association until 1878, when at the annual meeting the president moved the following: "That no female be eligible as a member of the Association." Dr. Garrett Anderson attended this meeting and opposed the motion in a courteous, restrained speech, part of which is worth quoting. Having pointed out that the objects of the British Medical Association would be best served by the inclusion of all medical practitioners, and that medical women would suffer greatly if excluded from the privileges of membership, she continued: "It would be Utopian to say that mutual knowledge would always make people friendly, but it is true that enthusiastic dislikes are maintained with greater difficulty between those who are personally acquainted with each other. Medical men do not dislike each other half as much as they dislike medical women, and there is therefore the more need that they should be brought under the mollifying influence of social intercourse." She quoted the story of Charles Lamb, who was heaping abuse on the head of someone when his friend said: "Lamb, how can you say that? How can you hate so heartily a man you do not know?" Lamb's answer was: "My dear fellow, of course I do not know him. How could I hate him at all if I did?"

Dr. Garrett Anderson's speech was received with enthusiasm, but the President's motion was carried, though not made retrospective, and she remained the only woman member of the British Medical Association for another nineteen years. In view of this, it should be noted that in New South Wales medical women have been welcomed to membership from the day of their graduation.

Although, in comparison with those of women in England, the difficulties confronting pioneer medical women of the University of Sydney may not appear to have been alarming, difficulties there certainly were. It is true that the general education of women had already reached a high standard in New South Wales; it is also true that the medical school of the University of Sydney has never made any difference between men and women undergraduates; but then, as now, it was more difficult, if not impossible, for pupils at girls' schools to obtain training in chemistry and physics, and women undergraduates were accordingly handicapped in the pre-clinical years. But the greatest difficulty confronting medical women on graduation was that of obtaining experience in the treatment of patients in the wards of public hospitals. In this connexion it is interesting to note that the Goodenough Committee, appointed to inquire into the organization of the medical schools in England, states in its report as recently as 1944 that "Without adequate opportunities for obtaining hospital appointments after qualification, medical women cannot qualify themselves properly for general practice, much less can they train for advanced medical work or specialist practice. Such opportunities are slowly extending, and women have already shown that they are capable of filling senior medical posts successfully. Although it is very difficult to obtain conclusive evidence, since the ability to fill a position is often a matter of opinion, it seems clear that women doctors are not yet receiving a fair share of graduate appointments owing to discrimination against them on grounds of sex".

The report continues: "Every possible step should be taken to secure that all hospital appointments should be filled by open competition, and that the sex of the applicant is not a bar to appointment." This difficulty of obtaining

hospital experience in Sydney accounts, in part at least, for the fact that our earliest women graduates mostly entered the Department of Education, in which their duties included medical inspections and the delivery of lectures on health subjects, or availed themselves of the more generous opportunities offered to medical women by hospitals in other States. It is true that the Royal Alexandra Hospital for Children and the Royal Hospital for Women in Sydney have always accepted women on their merits, but it must be remembered that previous clinical experience in a general hospital is a necessary qualification of successful applicants to these two hospitals.

The story of medical women in Australia begins in 1865, when an American graduate applied to the Medical Board of Victoria for registration. Dr. Wilhelmina Ferguson, a graduate of the University of Pennsylvania, had arrived as ship's surgeon on a freighter, but her qualifications were not acceptable to local members of the medical profession. Younger Ross, telling of this event, quotes from an editorial in *The Australian Medical Journal* published in Melbourne, the concluding paragraph of which reads: "There is little fear in any British community that medical women will exist as a class. They will occasionally be imported like other curiosities, and the people will wonder at them just as it wonders at dancing dogs and fat boys, and in accordance with the demand for novelties they will perhaps be as successful in a material sense, but they are not likely to be included in the list of British institutions." One wonders what this same editor would say if he could know that in 1958 there were 685 medical women registered in New South Wales alone.

The three senior Australian universities share the honours of priority in connexion with medical women. To Adelaide belongs the honour of being the first Australian university to agree to the admission of women to all faculties on equal terms with men, the charter for the establishment of the medical school on these terms being granted to the University of Adelaide in 1874. The medical school, however, did not open there until 1885, and the first woman student entered in 1886. The University of Melbourne can claim the honour of being the first to confer medical degrees on women, as Clara Stone and Margaret Whyte graduated there in 1891. Younger Ross relates a nice story of the entry into the Faculty of Medicine of these young women. Two of the group, Helen Sexton and Lillian Alexander, met at an English literature class and decided to embark on the medical course together, but feeling there would be strength in numbers they put the following advertisement in the Press on January 15, 1887: "Two young ladies are desirous of studying medicine in Melbourne, and would be glad to hear of others who would do so." This appeal produced five supporters, including Clara Stone and Margaret Whyte, and the entry of women into the Faculty of Medicine of the University of Melbourne became an established fact.

The University of Sydney may claim the honour of being the first to enrol a woman as a medical undergraduate at the medical school founded here in 1882, for in 1885 Dagmar Berne headed the long procession of women which has since passed through its doors. Dr. Berne completed her fourth year in Sydney but ultimately graduated in England. She returned to Australia in 1895 and commenced private practice in Macquarie Street, but died in 1900 at the early age of thirty-four. Dr. Scot Skirving, in a charming account of this young pioneer, has left us the picture of an intelligent, quietly mannered, sensible girl, whose name has been perpetuated at the University of Sydney in the Dagmar Berne Prize, presented by her mother and awarded to the woman medical graduate who obtains the highest marks in the final-year examination. It was not until 1893, however, when Isa F. Coghlan and Grace T. Robinson completed the course, that the University of Sydney could include the names of any women in their list of medical graduates.

Some relief of the difficulty encountered by women in obtaining clinical experience in Sydney was afforded by the establishment of the Sydney Medical Mission by Mrs. Hugh (later Lady) Dixon, and from its foundation to the middle of the first World War a series of young women gained valuable experience at this centre. The first medical officer to the Mission was Dr. Julia Carlile Thomas, who graduated

in 1897 and was travelling to England with a view to being trained for the mission field when she met Mrs. Dixon, who was a fellow passenger. The latter, well known in Sydney for her philanthropic activities, persuaded Dr. Thomas to turn her interest to the poor of Sydney, and offered to establish a medical mission in this city which, if it proved to be a success at the end of the first year, she would continue to support. The Mission eventually provided an out-patients' service, four beds for in-patients, and a domiciliary service in nearby districts. It operated at first in a shop in Elizabeth Street, and later in Lower Macquarie Street, now Wentworth Avenue. Later still

of medical women in hospital appointments became acute, as quite rightly preference was given to the returned men. It was probably this state of affairs which was partly responsible for the decision of two of our pioneer medical women to establish a hospital for women and children staffed by women. To these women, Harriet Biffin and Lucy Gullett, medical women of Sydney owe the foundation of the Rachel Forster Hospital for Women and Children.

Harriet Biffin, who graduated in 1898, was the first Sydney woman graduate to become established in a successful suburban general practice. In an obituary notice Dr. Margaret Harper wrote of her: "To her fell what Osler

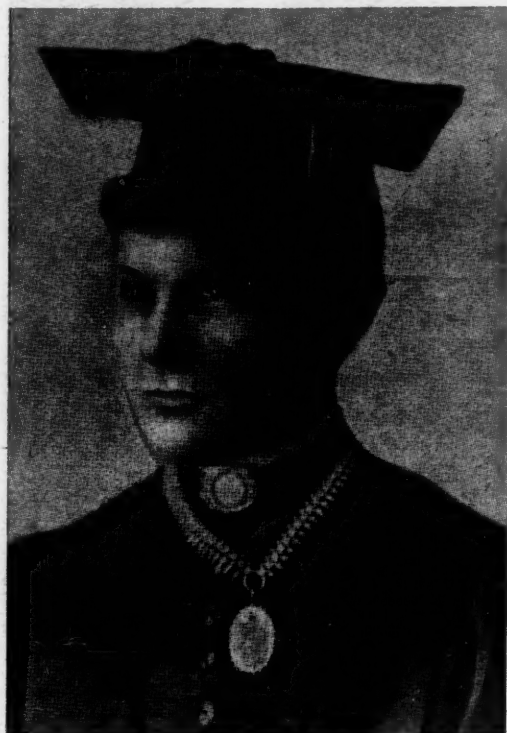


FIGURE I.  
Dr. Dagmar Berne.

Mrs. Dixon bought a terrace in Riley Street, Surry Hills, and gave two of the houses to the Mission. The medical staff of two women served in an honorary capacity, and the work was maintained by the cooperation of many voluntary helpers. Transport for visiting was provided in a decrepit vehicle of the type known as phaeton, drawn by an ancient horse and driven by a still more ancient man with a long white beard. It became well known in the poorer suburbs of Sydney.

The great value of the Mission to the young women graduates of that period lay in the fact that such men as Professor J. T. Wilson, Dr. William Crago, Dr. George Rennie, Dr. James Isbister and Dr. Storey Dixon served as members of the advisory committee and were available for medical advice and consultation. Dr. Thomas remained at the Mission until her marriage to Dr. Algernon Robert Fox, which on account of the bride's illness was performed at the bedside, and according to unofficial records the happy pair left for the honeymoon by ambulance.

By the time the Medical Mission closed the first World War was in progress. With so many medical men in the forces, hospital staffs were greatly depleted and many medical women were appointed to fill the vacancies. But with the return of the men to civilian life the question



FIGURE II.  
Dr. Isa Coghlan.

has called the happiest and most useful lot given to man—to become a vigorous, whole-souled, intelligent general practitioner." Dr. Biffin settled in Lindfield in 1904, at a time when her nearest medical colleagues were one at Chatswood and one at Pymble—this in an area now served by over fifty general practitioners. She became a familiar figure on the North Shore roads, with her hair cut short when women mostly wore it long, wearing tailored suits and a straw boater hat, driven in a smart little dog-cart by a groom in uniform. Children in the trains which passed the veranda of her house always hoped to receive a greeting in return to their waving hands if she happened to be seated there, and their delight was increased if her peacock was strutting in the garden. The little boys she brought into the world remained her patients when they grew up, and their wives and children were consigned to her care. It was the patients and friends of Dr. Biffin who provided a large portion of the funds raised for the foundation of the Rachel Forster Hospital, and many, both men and women, served as members of the board of the hospital in its early days.

Dr. Biffin was a woman of few words, but all who knew her will remember the determined line of her mouth and the expression in her blue eyes when she delivered her considered opinion on a particular problem. Her faith in



her women colleagues never faltered, and as women specialists in surgery, pædiatrics and pathology gradually appeared she gave them her whole-hearted support. Her faith in them culminated in her cooperation with Dr. Lucy Gullett in founding the Rachel Forster Hospital. To this hospital she devoted her money, her medical experience and her time, and no contribution was too great if she felt this child of her later years would benefit thereby. On her retirement from practice, the medical women of Sydney presented her with a sum of money for the hospital as a token of their affection and appreciation. This she spent

quality of the medical women who were graduating from the University of Sydney in increasing numbers, but the first World War and the difficulties of the early post-war period intervened. However, the delay is probably not to be regretted, as when the movement for the establishment of such a hospital was initiated women of the quality of Dr. Biffin and Dr. Gullett were here to lead it.

The hospital was opened for out-patients in 1922, in an old house in Surry Hills, the structure of which had become so infirm that no patient was allowed to go upstairs, this hazardous undertaking being reserved for the honorary



FIGURE III.  
Dr. Grace Robinson.

on the operating theatre which bears her name. The success of a general practitioner depends on many and varied qualities, and that Dr. Biffin possessed such qualities is evidenced by the reputation she left behind her. She was indeed one of Osler's "vigorous, whole-souled, intelligent general practitioners".

Lucy Gullett, her colleague, friend and collaborator, graduated in 1900. It was once said of George Lansbury that his heart was as large as a cabbage and that he wore it on his sleeve. Lucy Gullett's heart was certainly at least of similar dimensions, and no appeal to it went unanswered. The profession of medicine was interpreted by her as affording an opportunity for dispensing kindness as well as medical assistance. Having gained general experience in Brisbane, Dr. Lucy Gullett went into private practice first at Bathurst and later at Kirribilli, Sydney, and was an honorary physician at the Renwick Hospital for Infants. She served with a French hospital at Lyons during the first World War, and in 1921 visited Melbourne for the jubilee celebrations of the Queen Victoria Hospital, established by medical women there in 1896. This visit diverted her interests into the channel through which they flowed for the remainder of her life—the establishment in Sydney of a similar hospital. It is not unlikely that such a hospital would have been founded several years earlier in view of the success of the Melbourne women, and of the



FIGURE IV.  
Dr. Julia Carlile Thomas.

medical officers! From the beginning, Dr. Gullett, whose sympathies were always with the less fortunate members of the public, insisted upon the hospital being opened at night for one session a week for women unable to attend during the day, and for several years she conducted this session herself. In 1939 plans for the present building of one hundred and twenty beds were prepared, and in June, 1940, a board meeting was held to consider the tenders for the new building. A dramatic meeting it proved to be, for the chairman entered carrying a mid-day paper which displayed in enormous letters the terrifying words: "Last of Channel Ports Fall." After a period of stunned dismay, Dr. Gullett spoke. "Well", she said, "I think we should go on with the building of the new hospital. If the British Empire falls it won't matter on what we have spent our money. If it doesn't, we shall have our hospital." The enlarged hospital stands today—a witness to the courage and confidence of Lucy Gullett.

Second only to her love of human beings was her love of dogs. She was once heard to say that she thought the stray dogs in Kirribilli must let one another know where food and shelter were always forthcoming; and excusing herself for being late for an appointment on another occasion, she stated that she and her sister were caring for five strays in their home and had twenty-five others boarded out, necessitating weekly visits to see that they were properly cared for. A memorial to Lucy Gullett's family exists in the Shakespeare statue by Bertram Mackennal, presented to the city of Sydney by her father; her own memorial lives in the hospital which she loved



and for which she laboured, in the convalescent home which bears her name, and in the memories of all who were privileged to know her.

In pursuance of the wishes of the founders of the Rachel Forster Hospital, it has been the policy of the board to appoint medical women to resident and honorary appointments if suitable applicants are available, but in pursuing this policy the debt the hospital owes to several of our male colleagues must not be forgotten. In particular the acceptance of the appointment as Senior Physician by Sir Charles Blackburn and as Senior Surgeon by Sir Benjamin T. Edey on the foundation of the hospital gave medical women the greatly needed encouragement in their undertaking.

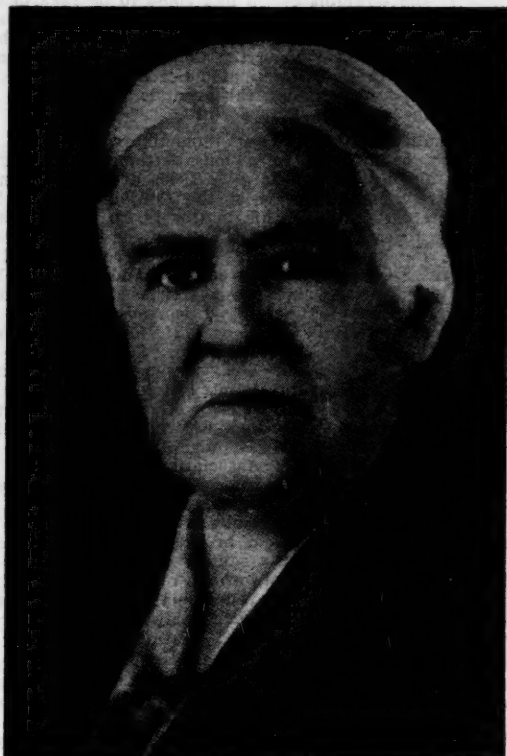


FIGURE V.  
Dr. Harriet Biffin.

One of the foundation members of the Rachel Forster Hospital was Dame Constance D'Arcy, who automatically took charge of the gynaecological section of the hospital on its establishment, and was connected with this department until her death. In the early part of the century the mention of medical women would bring to the minds of the general public of Sydney the name of Constance Elizabeth D'Arcy. This honour was well deserved, for Dame Constance, as she became in later years, had established a successful practice as a surgeon—probably the most difficult and exacting specialty in all medicine and certainly the one most hedged with difficulties for a woman.

Dame Constance was the fifth daughter in a family of eight and at the end of a successful university career graduated with second-class honours in 1904. Endowed with a good physique and with the courage and ability to make a sound decision on the available evidence, Dame Constance found her greatest interests were gynaecology and obstetrics. That she succeeded in these fields was proved by the fact that many of her male colleagues entrusted their wives and daughters as well as their

patients to her care. Her interest in clothes and personal adornment revealed a strong feminine element among her qualities. One who knew her well has described her as "a valiant woman who joined a man's thought to a woman's heart". Dr. D'Arcy was the first woman appointed as resident medical officer to the Royal Hospital for Women, having gained her general hospital experience in Adelaide. She was a member of the honorary medical staff of this hospital from 1908 to 1939, and was the first university lecturer in clinical obstetrics to the hospital. On the establishment of a clinical school at St. Vincent's Hospital, she was appointed senior gynaecologist, and remained associated with this hospital until her death. She was also a Foundation Fellow of the Royal Australasian College of Surgeons.



FIGURE VI.  
Dr. Lucy Gullett.

Outstanding as were her successes in her profession, Dame Constance will also be remembered for her participation in the life of the community. Believing that professional women owe a duty to the public as well as to their profession, she trained herself to become the good speaker and committee woman that she was acknowledged to be. Those closely associated with her never ceased to marvel at her willingness to serve in an executive capacity any organization in whose aims she believed.

In 1919 Dame Constance was elected to the Senate of the University of Sydney—the first woman to achieve this honour. She remained a senator till 1949 and filled the position of Deputy Chancellor from 1943 to 1946. The interests of women undergraduates became her particular interest, and the number of offices in connexion with their university activities which she occupied bears testimony to her keen participation in their problems. Dame Constance demonstrated that there is room at the top of the professional tree for women with the ability to climb there, and the reputation she earned among the medical profession and the general public did much to establish the status of medical women in Sydney.

With the appearance of the names of women among the most successful graduates in medicine, it was only a question of time before women would earn the right to

appointments as resident medical officers at teaching hospitals in Sydney. Appointments to these coveted positions were made by committees selected by the boards of the individual hospitals, and in the case of the Royal Prince Alfred Hospital submitted for confirmation to the Conjoint Board which consisted of the University Senate and the board of this hospital. The first medical woman to qualify for such an appointment was Dr. Susie O'Reilly, who in 1905 took fourth place in her final year and was nominated as one of seven resident medical officers to Sydney Hospital. The board of this hospital, however, pointed out with polite regret that no accommodation suitable for women residents was available. The shock of this announcement was softened somewhat by an accompanying statement that the directors were sympathetic to women graduates and

on account of their sex. This letter was acknowledged by the superintendent of the hospital, who wrote: "The matter (of your letter) was considered at a special meeting of the Board of Directors held on the 30th of July, at which it was resolved to accept women residents at the hospital, other things being equal, and subject to the appointments being confirmed by the Conjoint Board."

With such assurances from the two teaching hospitals, the women in the Faculty of Medicine felt that their cause was won, and indeed this seemed to be so when at the end of that year one of the six women to graduate was nominated for appointment to the Royal Prince Alfred Hospital. The successful applicant was Jessie Aspinall, whose name was to become a household word throughout Australia during the weeks that followed. As confirmation of appointments by the Conjoint Board had come to be regarded as a mere formality, Dr. Aspinall entered upon her duties at the hospital with her six male colleagues, and had been in residence ten days when the Conjoint Board met and, by nine votes to eight, eliminated her name from the list of successful applicants on the grounds that "it was not desirable to appoint a lady doctor".

Dr. Aspinall's father took immediate action on his daughter's behalf and in a long letter to the *Sydney Morning Herald* of February 9, 1906, drew attention to the injustice of the action of the Conjoint Board. The public interest taken in this matter is, to say the least, surprising today. Dr. Aspinall's brother, the late Dr. Archie Aspinall, has left a carefully tabulated collection of all newspaper references to the subject, and these include numerous editorials and other articles in the *Sydney Morning Herald* and the *Daily Telegraph*, articles in the *Bulletin*, *Sydney Mail*, *Stock and Station Journal*, *Town and Country Journal*, *Evening News*, *Sunday Times*, the *Star*, and the *Australasian*. Daily newspapers of Melbourne and Brisbane and several country papers considered the subject worthy of notice. Reports of questions in Parliament, of indignation meetings of women's organizations such as the Women's Political and Educational League and the Women's Progressive Association are included. An invitation from the late Lady David to all those interested in the matter to support a movement to approach the Conjoint Board was printed in the *Daily Telegraph*. The hysterical language indulged in by some writers reached a climax in the concluding sentence of an article in the *Stock and Station Journal*, which reads: "Miss Aspinall will pass into history as a noble martyr, while the men who threw her out will be bracketed with Bloody Jeffreys, Torquemada and Judas Iscariot."

Over forty letters were printed in the *Sydney Morning Herald* and the *Daily Telegraph* alone. Many expressed concern at the action of the University Senate; some were written by well-known medical men and women; but as is usual in correspondence of this character, the majority of the letters bore *nom de plumes*. One, signed "Decency", produced a flood of replies. The author, working herself or himself into a frenzy, wrote: "Many of the cases brought into a general hospital are those of accidents to men full of drink and involving treatment which it would be disgusting wickedness to set a young girl to perform, perhaps in company with another resident—a male—a mere youth!" A voluminous correspondence between "One Who Knows", "One Who Wants to Know", "One Who Knows Also", and "One Who Knows a Little Better" was carried on for some weeks.

One who must surely have regretted entering the lists on Dr. Aspinall's behalf was Dr. Margaret Harper, who with the enthusiasm and lack of experience of a very recent graduate granted an interview to a reporter of the *Evening News* and expressed her opinion of the University Senate. The temerity of such an action aroused the wrath of Dr. Scot Skirving, who in pointing out to Dr. Harper that this was an infringement of medical ethics, indulged in his customary colourful language, the memory of one sentence of which, she assures me, haunts her still: "How could you do this? You, with the Chancellor's hands not yet cold upon you! Flee the Press as you would the Devil!" And in the meantime Dr. Aspinall waited anxiously for a solution of the problem which concerned not only herself but all medical women graduates of the University of



FIGURE VII.

The first Rachel Forster Hospital for Women and Children.

planned to include accommodation for two women, if such were appointed, in the extensions to the hospital then being made. Dr. O'Reilly in the meantime obtained an appointment at the Adelaide General Hospital, and later joined her father in private practice at Pymble, from which she retired a few years ago. It must be recorded that the board of Sydney Hospital honoured their promise and in 1910 appointed two women, Alexa Maclean and Elizabeth Hamilton Browne, as the first women resident medical officers to the hospital.

Alarmed by the treatment meted out to Dr. O'Reilly, the women undergraduates in medicine in all years wrote a letter to the board of management of the Royal Prince Alfred Hospital on June 26, 1905, pointing out that as far as appointments to teaching hospitals were concerned they felt they were debarred from equal opportunities with men

Sydney. One hopes that the gold watch presented as an expression of their sympathy by her male colleagues in residence at the Royal Prince Alfred Hospital may have afforded her some consolation.

The position became less acute when the board of directors of the Royal Prince Alfred Hospital, at a special meeting on March 2, 1906, resolved that: "In deciding the duties of women residents, they should be exempted from attendance on certain cases." This decision, described in a leading article in the *Daily Telegraph* as providing the University Senate with a loophole, was accepted at a meeting of the Conjoint Board, when it was resolved that "Dr. Aspinall be appointed for this year but that her appointment is not to be taken as a precedent".

disturb her sincerity of purpose; each regarded herself as a pioneer in the true sense of the word, and realized that failure in the cause she had undertaken would defer the hopes of medical women for many years.

Dr. Aspinall, having gained further clinical experience in the Hobart General Hospital and in the Women's Hospital, Crown Street, undertook private practice in Macquarie Street, Sydney. In 1915 she married and lived in Malaya for some years. She was an active member of the Red Cross Society during the second World War, and in 1941 donated her home in Bowral, New South Wales, to this Society.

A graduate of the same year as Jessie Aspinall was Margaret Harper, who with Dame Constance D'Arcy

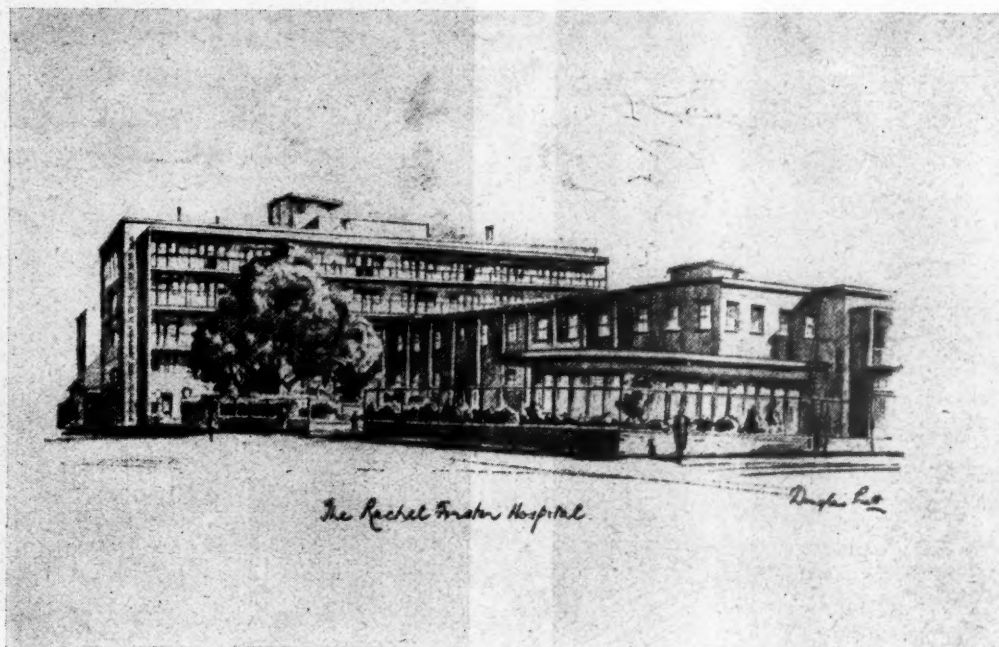


FIGURE VIII.

The present Rachel Forster Hospital for Women and Children.

Although unsatisfactory from some aspects, this was the beginning of the end. However, the question of the duties of women residents was not finally settled until May 9, 1909, when at a special meeting of the Conjoint Board a motion that the duties of women residents should be restricted to women's and children's wards was lost on the casting vote of the Chancellor, Sir Norman MacLaurin.

Jessie Strahorn Aspinall was the only daughter of the Reverend A. Ashworth Aspinall, a headmaster of the Scots' College, and she and her four brothers all graduated in medicine at the University of Sydney. It was fortunate for medical women that the not very pleasant experience of finding herself the central figure of what may perhaps be described as a *cause célèbre* fell to the lot of one possessing the qualities of Jessie Aspinall. In many respects she and Elizabeth Garrett Anderson were alike. Both were brought up in comfortable homes in an atmosphere of culture; both were encouraged by their families in their professional careers, and were untroubled by financial problems; both possessed good looks and charm of manner; both had self-control and remained in command of themselves in most trying positions; both married, and each produced among other children a daughter who followed her mother into the medical profession. The success that each attained in her effort to further the cause of medical women failed to

pioneer the way for medical women of the University of Sydney into the field of specialist practice. Dr. Harper transferred from the University of Melbourne to the University of Sydney when her father, the late Professor Andrew Harper, was appointed to St. Andrew's College as its Principal. Professor Harper had a world-wide reputation as a theologian and a Hebrew scholar, and his home attracted the intellectuals in any community. His family thus became accustomed to hearing and sharing in discussions on all subjects, and were trained to develop an interest in general affairs and a love of literature. After graduation Dr. Harper worked at the City Mission for a short period and later gained general hospital experience in Melbourne. She was appointed to the Royal Hospital for Women, Paddington, as resident medical officer and moved from there to the Royal Alexandra Hospital for Children, and so into the field of paediatrics which ever since she has adorned. She was the first woman to be appointed Chief Resident Medical Officer to the Royal Alexandra Hospital for Children, and later the first to join the honorary staff as physician and, finally, as consultant. The newborn and young infants became her special interest and she brought to the study of them not only a profound academic knowledge but also the invaluable personal gift of sound common sense.



Dr. Harper was the first honorary medical officer to be appointed to care for the newborn at the Royal Hospital for Women and the first lecturer in diseases of the newborn in the University of Sydney—the first appointment of its kind in the British Empire. She was the medical officer attached to the first baby health centre, and the first honorary director of the Tresillian Mothercraft Training Schools. During her tenure of the latter position she was the moving spirit in the establishment of three Tresillian Homes and Carpenter Mothercraft House by the Royal Society for the Welfare of Mothers and Babies. As director of this Society she adapted and modified the principles of Sir Truby King's teaching to make these homes something entirely her own. As an aid to young mothers—and, she hoped, to young fathers—she wrote "The Parents' Book", which has proved its value by recently reaching its nine-

gluten-free diet now the accepted form of treatment for this condition.

As early as 1925 Dr. Harper was recognizing the importance of hæmolytic disease of the newborn, at a time when few paediatricians were aware of the significance of this disease, and she was one of the first in Australia to use blood transfusions in the treatment of anaemia in early infancy.

Dr. Harper was a Foundation Fellow of The Royal Australasian College of Physicians, and one of the founders of the Rachel Forster Hospital, where she is credited with the honour of having treated the first patient to attend that hospital. The Margaret Harper Diet Kitchen in the Royal Alexandra Hospital for Children stands as a per-



FIGURE IX.  
Dame Constance D'Arcy.

teenth edition. In this book she expresses a sound practical approach to breast feeding and to artificial feeding when required. Many young mothers have been heard to refer to it as their Bible.

Dr. Harper has attained an international reputation not only in her teaching of the care of the premature and newborn, but also as one of the two clinicians who first recognized and described the differences between coeliac disease and cystic fibrosis of the pancreas. In recognition of this priority, Professor Charles D. May of the University of Iowa dedicated his recent monograph on the subject of cystic fibrosis of the pancreas as follows: "To the practitioners—Margaret Harper of Sydney, Australia, and Arthur H. Parmelee of Chicago—who recognized the salient clinical features of patients found to have cystic fibrosis of the pancreas, published the first papers indicating the frequency and importance of the disease, and clearly set it apart from coeliac disease against the prevalent practice." As pointed out by Professor Lorimer Dods, it is interesting to note that Dr. Harper's successful management of infants suffering from coeliac disease was based on a diet which excluded cereals, bread, and other forms of wheat starch—a diet which has many features in common with the

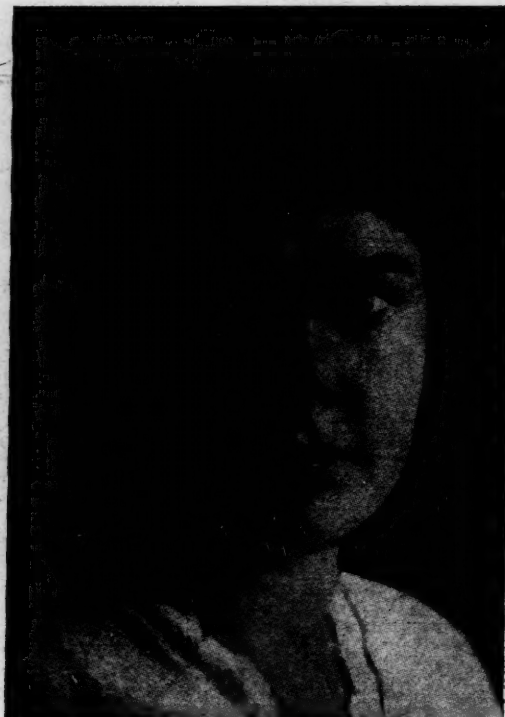


FIGURE X.  
Dr. Jessie Aspinall.

manent memorial in recognition of her outstanding contributions in the field of infant nutrition.

With the doors of the medical school open to them, and equal chances of resident appointments in teaching hospitals assured, it was to be expected that opportunities for medical work abroad would before long be sought by some of Sydney's most gifted women graduates. One of the first to respond to such a call was Elsie Jean Dalyell. Dr. Dalyell graduated with first class honours in 1909—one of a group of women whose academic successes have not yet been equalled at the University of Sydney, since of the seven who graduated together three gained first class honours and one second class honours. Dr. Dalyell, with the late Dr. Mary Burfitt-Williams, was appointed to the Royal Prince Alfred Hospital as a resident medical officer; they were the first women to follow Dr. Aspinall.

At the end of her year's residence she accepted the invitation of the late Professor Welsh to join his staff in the Department of Pathology, thus becoming the first woman to be appointed to the teaching staff of the medical school. She proved to be a lecturer and demonstrator of unusual gifts, and today those who were her students still speak of her as one of the outstanding memories of their medical

course. Her presentation of scientific material, both spoken and written, was flawless. Those who were present will remember the address she delivered to the British Medical Association on the results of researches into rickets and other deficiency diseases, carried out in London and Vienna by the team of which she was a member. She spoke on that occasion for nearly two hours without notes, and received an ovation from the crowded audience who had listened spellbound to her fascinating story. Her keen sense of humour and clever prose recitations made her the centre of any gathering, and memories of lively times spent in

with the Scottish Women's Hospital at Royaumont. Here, in a wonderful but quite unsuitable old monastery, this unit, staffed entirely by women, cared for sick and wounded from the French Army, and here Dr. Dalyell successfully tackled that most difficult bacteriological problem of the war on French soil—the problem of the anaerobes, causal organisms of such infections as tetanus and gas gangrene.

In 1916 the War Office was persuaded that medical women could be used in base hospitals to relieve men for duties further forward, and launched an appeal inviting medical women to serve with the Royal Army Medical Corps. However, even with such an appeal certain limitations in regard to status were defined. Medical women did not hold the King's commission but were described as being



FIGURE XI.  
Dr. Margaret Harper.

her company are precious to her friends. After one such evening, when a group of Sydney graduates had entertained at dinner a party of medical women from Melbourne, one of the visitors was heard to remark: "Well, I must confess I do not often find much in Sydney that is better than Melbourne, but we Melbourne medical women always wish that Dr. Dalyell belonged to us."

In 1913 Dr. Dalyell gained a Belt Travelling Fellowship—the first Australian woman to be so honoured—and went to the Lister Institute in London to carry out investigations into the bacteriology of infantile intestinal infections. Here she fell under the spell of the late Sir Charles Martin and received from this great scientist the welcome always awaiting Australian laboratory workers. With the outbreak of war in 1914, Dr. Dalyell offered her services to the War Office, but at that stage the idea of using medical women in their organization was never considered. Hence many women desirous of serving their country joined one of the private hospital units which were going abroad to care not for our own men but for the sick and wounded of our allies. Dr. Dalyell served with such a unit in Serbia, where a severe epidemic of typhus was encountered, and in France



FIGURE XII.  
Dr. Elsie Dalyell.

"attached to the R.A.M.C.". They wore the R.A.M.C. badges, but no badges of rank; in fact, it was only after a struggle that women carrying out the duties of specialists, as Dr. Dalyell did when in charge of a laboratory, were allotted the extra allowance paid to specialists. It is interesting to record in passing that even as late as 1938 the Director of Medical Services in Britain, when approached by the Medical Women's Federation, declared himself unable to see what possible use medical women could be to His Majesty's forces. The Munich crisis, however, changed this opinion, and once again medical women were invited to volunteer for general regimental and hospital duties with the services. Equality of pay was at once conceded, although an attempt was made to grant women smaller allowances than men on the ground that the calorific requirements of women are less than those of the opposite sex. The Medical Women's Federation, however, quickly drew attention to the fact that hotel and restaurant charges are never based on this scientific observation.

Dr. Dalyell responded to the War Office appeal of 1916 and was sent first to Malta and later to Salonika. In Malta her duties were partly clinical and partly pathological, but in Salonika she was in charge of the laboratory in a large tented hospital on the hills above the town. Here she organized a pathological service which won the admiration of all who saw it; she even managed to devise equipment for the giving of blood transfusions from the scanty apparatus available. For her services here she was awarded an O.B.E. and mentioned twice in dispatches. After the

armistice Dr. Dalyell served in Constantinople for a time and then returned to England, intending to take up her interrupted work at the Lister Institute. However, she accepted instead an invitation to join, as senior clinician, a small unit of scientific women selected by the Medical Research Council and the Lister Institute to study post-war nutritional diseases in Vienna, under the leadership of Dame Harriette Chick.

Much experimental work had been carried out at the Lister Institute on rickets and other deficiency diseases, but the crucial test on human beings could be applied only to a population already suffering from these conditions. Unfortunately, such conditions were all too prevalent in Central Europe at the end of the first World War. The unit worked in Vienna from 1919 to 1922, and their results contributed greatly to our knowledge of many deficiency diseases. Working in Vienna under immediate post-war conditions was anything but a pleasant adventure. This band of five women realized that in addition to the language problem there were many difficulties to be faced, but with the exercise of tact and sympathy and numerous acts of kindness a situation was developed described by Harriette Chick as "the establishment of emotional relationships". The British team was allotted sixty cots with complete nursing and domestic services in the University Kinder-klinik, the director of which was the late Professor von Pirquet, who held the opinion that rickets was an infection, comparable to some extent with tuberculosis, and who admitted that he welcomed the possibility of using the children treated by the British team as controls to his own investigations. At the end of the three years of intensive study, however, it was the children under the care of von Pirquet who were found to have served as controls to the children treated by the British workers! In a preface to the Medical Research Council's report in which the results of the British workers were published, Professor von Pirquet generously admitted that the clinical investigations of the British team confirmed their experimental work on animals, thus proving the fallacy of his own theory.

Those who were associated with Dr. Dalyell in the scientific field in London were convinced that a brilliant future lay before her there, but she returned to Sydney for family reasons, and in 1924 was appointed Assistant Microbiologist in the New South Wales Public Health Department. She was invited to develop the clinic for the treatment of venereal diseases at the Rachel Forster Hospital, and for six years she and the late Dr. Maisie Hamilton devoted much effort and enthusiasm towards making this clinic a model of its kind.

Medical women of the University of Sydney are justly proud of Dr. Dalyell, for in addition to the many services she rendered to them individually and collectively she succeeded in placing the name of one pioneer medical woman of her university in the scientific annals of England. Her colleagues in England have commemorated her by a gift in her name to the National Trust Fund of Scotland—a fitting memorial to one proud of her Scottish ancestry.

The group of women of whom we have been thinking tonight were well aware of the responsibilities they accepted as pioneers in the demanding profession of medicine. Personal success was associated in their minds with recognition of what such successes might mean, not only to themselves, but also to those who were to follow them. That they did not fall has placed all medical women of New South Wales in their debt—a debt which can best be repaid through the years by the maintenance of the standard they set.

A glance such as this into the past seems to lead naturally to visions of the future, and these visions suggest that among the medical women who have graduated since the period covered there are certain to be some who in years to come will be regarded as pioneers by future observers. But although the field of medicine has unlimited boundaries, conditions favouring the appearance of pioneers do not occur every day. Medical women must therefore continue to keep the pioneer spirit alive and be mindful of the words of Pasteur, that "chance favours only those who are prepared". In commemorating some pioneer

medical women of the University of Sydney tonight, we are not forgetting the many whose names have not been mentioned, but are acknowledging the part all have played in advancing the art and science of medicine in New South Wales.

#### Acknowledgements.

My sincere thanks are due to Mrs. A. W. Morton for making available the newspaper cuttings concerning the appointment of her mother, Dr. Jessie Aspinall (Mrs. Ambrose Freeman), to the Royal Prince Alfred Hospital. I am also indebted to Dr. A. M. McIntosh, Dr. K. Macarthur Brown, Miss M. Telfer, Miss M. Rolleston, Dr. Mary Puckey and Professor Lorimer Dods for assistance willingly given and most gratefully received.

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### CANCER STATISTICS IN AUSTRALIA. PART I.

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 Sydney.

WITH the completion of a further five-year period, it is convenient now to bring my survey of cancer mortality in Australia up to date. As comparisons can readily be made by reference to a previous paper (Lancaster, 1954), wherein rates are given for 1931 to 1940 and 1946 to 1950, I shall give in this paper rates for 1951 to 1955 only and use graphs to make comparisons with previous periods, without any reference back to the actual figures of previous papers. I shall attempt to give a review of the literature on Australian cancer statistics and of other work bearing on Australian cancer mortality statistics. In the preparation of this review I have consulted the files of THE MEDICAL JOURNAL OF AUSTRALIA and its predecessors for the years since 1900, the complete sets of the *Australasian Annals of Medicine*, the *Australian and New Zealand Journal of Surgery*, the *Journal of the Cancer Research Committee of the University of Sydney*, the transactions of the various medical congresses in Australia, the proceedings of the meetings of the Australian and New Zealand Association for the Advancement of Science, the *Journal of Hygiene (Cambridge)*, *Human Biology*, and *Excerpta Medica (Cancer)*. I have, further, searched official publications such as the Service Publications of the Commonwealth Department of Health, reports of Royal Commissions, *Demography*, the *Commonwealth Year Book*, and finally the standard actuarial journals. It is hoped that most papers dealing with cancer in Australia with a substantial statistical content have been consulted.

#### Primary Sources of Data on Cancer in Australia.

The primary official sources of data are *Demography*, the annual bulletin of the Bureau of Census and Statistics, Canberra, and the corresponding bulletins of the bureaux in the individual States. These give extensive tables of cancer deaths by sex, age, marital status, occupation and other factors.

From time to time various individual workers have reported on aspects of aetiology, pathology, treatment and follow-up studies. I shall mention these when they appear to throw light on the Australian official statistics. There was an attempt to encourage and systematize such studies on cancer in the 1930's by the holding of cancer conferences. It was hoped that from these studies Australia-wide statistics would be obtained. The general results of this work were disappointing, largely because there were insufficient clinicians or laboratory workers in Australia



at that time interested in the projects. However, in 1939 the Victorian Cancer Registry was formed by the Anti-Cancer Council of Victoria and, after being closed for some years during the last war, was reopened in 1946. It has now a wide, practically complete, cover of cancer cases in Victoria. Even without such an organization there is a possibility of organizing follow-up investigations and other inquiries on a practically State-wide basis in Queensland and South Australia because of the centralization of existing facilities there. In New South Wales more difficult problems of cooperation between hospitals and other instrumentalities have to be solved. An Australia-wide survey on female genital cancers is being sponsored by the Royal College of Obstetricians and Gynaecologists (Regional Council in Australia, Annual Report, 1957).

#### The Total Mortality from Cancer.

In Figure I and Table I are given the death rates for either sex by age for the latest period available, 1951

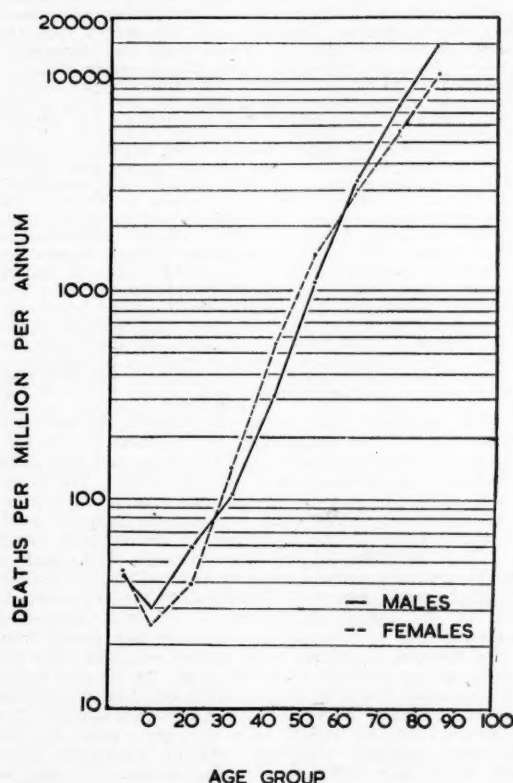


FIGURE I.

The trend in the mortality rate from all cancer by age for the two sexes in Australia for the period 1951 to 1955.

to 1955. It is evident that the death rates from cancer increase with age very rapidly and, as we shall soon see, many mistakes in interpretation have been made in the past by under-estimation of the effect that this age distribution has on the crude death rate from cancer, that is, the total cancer deaths per million of total population per annum. The female rates are higher than the male rates up to about 55 years of age, but at higher ages males suffer the heavier rates. At the ages under 55 years, cancers of the breast, uterus and ovary account for many deaths in females and have no counterpart among the cancers of the male. Many of the common cancers of other sites fall more heavily on the males—

for example, cancer of the lung, of the stomach and of the pancreas.

Some importance has recently been attached to the form of relationship between the cancer death rates and age. In many countries an empirical relationship has been established, whereby the logarithm of the cancer rate increases at a rate of approximately six times the logarithm of the age. Nordling (1953) pointed out that this may be interpreted to mean that six separate changes in the cell are required before it becomes malignant. Armitage and Doll (1954) have explored this possibility further, and Metcalf (1955) has applied the methods to the Australian cancer and leukaemia statistics. Whether this relationship has special importance or not, the form of the age trends of the death rates from cancers of individual sites should always be examined closely. Metcalf (1955) found, for example, that the curves for cancers of the uterus and of the breast were of a different form and this might mean that there were special influences at work during the reproductive ages. Cancer of the lung was also found to have an anomalous form and this anomaly disappeared if the rates were considered on a generation basis (Kennaway and Waller, 1953); this can be given an etiological interpretation, namely that the total dosage of carcinogen over the whole of an individual's lifetime is of importance.

TABLE I.  
The Mortality in Australia from Malignant Disease, 1951 to 1955.

Age (Years).	Deaths per Million per Annum.					
	Malignant Disease other than of the Blood and Lymph Systems. <sup>1</sup>		Neoplasms of the Lymphatic and Hemopoietic Systems. <sup>2</sup>		Class II. <sup>3</sup> (All Neoplasms.)	
	Male.	Female.	Male.	Female.	Male.	Female.
0 to 4	41	44	65	62	125	123
5 to 14	29	24	45	30	82	64
15 to 24	57	39	44	20	111	70
25 to 34	102	147	46	39	171	208
35 to 44	318	509	70	48	421	605
45 to 54	1,123	1,426	130	86	1,511	1,594
55 to 64	3,417	2,305	236	161	3,764	3,040
65 to 74	7,701	5,290	375	261	8,176	5,643
75 and over	15,580	10,715	368	296	16,001	11,159
All ages	1,227	1,170	101	76	1,363	1,287

<sup>1</sup> Numbers 140 to 199 of the International Statistical Classification.

<sup>2</sup> Numbers 200 to 205 of the Classification.

<sup>3</sup> Numbers 140 to 239 of the Classification.

It is, perhaps, appropriate to mention here the reviews of the aetiology of cancer given by Green (1954), Kennaway (1955), Huxley (1956) and Burnet (1957), before passing on to a consideration of the Australian statistics.

To avoid disturbances of the comparisons by changes in the age distribution, we may use age-specific mortality rates as in Figure II. There have been some improvements in mortality at the younger ages, in females up to 65 years and in males up to 55 years of age. At higher ages there has been a tendency for the rates to increase, possibly spurious at the highest ages. This pattern of mortality from cancer of all forms combined conceals some changes in the mortality from cancers of individual sites. However, it can be shown from the paper of Allen (1902) and from Figure II of this paper that there was a long-term trend in the cancer rates extending from 1870 to about 1930. The trend of the mortality rates from cancer was a special topic considered at the Sixth Session of the Intercolonial Medical Congress of Australasia in some nine papers. Allen (1902), in his introductory address, gave cancer statistics for the three periods 1870-72, 1880-82 and 1890-92, and for the year 1900, making use of the exact population statistics available from the censuses of 1871, 1881, 1891 and 1901. If a table is made from the mortality rates of Allen (1902) for the earlier years and

of Lancaster (1950) for the later years, the rates at young ages appear to have been rather stable from 1870 up to the present time. But at the higher ages, say over 45 years, there had been a tendency to increase until 1930. Since 1930, however, there have been some improvements of the rates up to the age of 75 years. Allen (1902) drew some conclusions from his study that are worth citing.

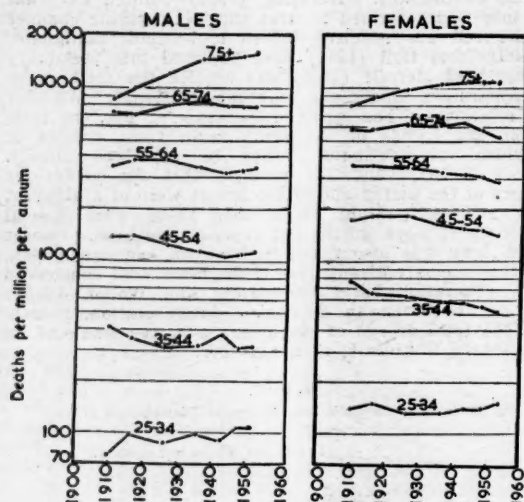


FIGURE II.

The trends in the age-specific mortality rates from all cancer in Australia from 1908 to 1955.

While I am not prepared absolutely to deny that there has been any increase in the prevalence of cancer, I can state positively that malignant tumours in young people show no recent sign of increase; that among the external cancers, which are easily recognized, those of the face and lip in males appear to be less frequent than formerly, while cancer of the breast in women has also decreased; that uterine cancer has only slightly increased, the rates for women under 55 being lower than they were thirty years ago; that the apparent increase of cancer is most marked in old people, and particularly in women of 75 and upwards; and I am strongly of the opinion that most of this apparent increase is fictitious, being due partly to changes in the age distribution of the population, and partly to more regular medical examination, better diagnosis, and more explicit registration.

Verco (1902), discussing the South Australian statistics, noted that the age distribution of the cancer death rates would make comparisons between two different populations difficult unless care was taken to use a standard population. He concluded:

1. Our mortality is less than that of England and Wales, being about 82 per cent. of it.
2. Our mortality is progressively increasing, having risen more than 50 per cent. in 20 years.
3. Our mortality is equal in men and women, whereas in the Old Country it is about 50 per cent. greater in the latter than in the former.

He gave plausible explanations of these three findings. The first is to be explained by the reluctance of medical men certifying a death to assign the cause of death to cancer when the relatives and others fear that cancer has a strong hereditary tendency. Moreover, the medical attendant may not have the facilities to make the diagnosis. The second is to be explained by the improvement in certification, the coming of more medical men and the increasing efficiency of diagnosis. However, it appears that Verco (1902) made rather too much of the "low death rate" among women, for the tables of Allen (1902) show that in Australia generally the death rates

from cancer of women were greater than those of men up to the age of 55 years and at higher ages were not much inferior.

Coghlan (1902), on the other hand, using statistics from New South Wales, thought that the first two explanations of Verco (1902) were not adequate and considered that there had been a real increase above what could be reasonably ascribed to improved diagnosis. He then discussed in a very interesting manner the hypothesis that has again been brought forward in our time to explain the increase in lung cancer in the following words.

The question to be considered is: Does the saving of life from the earlier ages by reason of better sanitary provision, by the advancement of medical science, or however arising give an increased constituency in the older ages from which the increase in the cancer rate is derived, the supposition being that these saved lives are somehow or other, more susceptible to cancer than the rest of the population?

Of course, every additional life saved and carried forward provides an additional source from which cancer may be experienced, since the disease is common in less or greater degree to all life stages, but the question to be settled is: Whether all the increase of cancer may be derivable from these saved lives, or whether it is due to greater virulence in the disease itself, or to a greater susceptibility on the part of the population, or to increased opportunities for its spread?

In the appended tables, A and B, the hypothetical lives are given in the various age groups, on the supposition that the general mortality rate in 1875, the commencement of the period which I propose to review, had prevailed throughout. The number compared with the actual numbers living gives the salvage population at each later period. The hypothetical cancer deaths are similarly obtained on the supposition that the initial cancer rate had remained constant throughout. The results show salvage population together with the cancer increase, and relating these numbers we obtain the necessary "salvage cancer rate", if the theory be true that the rate amongst the ordinary population is not greater than formerly, the increase being due to the presence of these salvage lives.

Coghlan concluded that the death rates in the salvaged lives in 1896 to 1900 would have to be about 8% to 15% per annum in males at ages over 45 years, and over 15% per annum in females at ages over 45 years. He therefore put aside the salvage theory and considered a more special hypothesis—that the increase in cancer death rates was related to the decreases in tuberculosis death rate. This hypothesis was that persons with such a diathesis are very prone to die of tuberculosis or cancer. Any relief from tuberculosis would then be expressed in a rise in the cancer death rates. It was, indeed, a coincidence that the death rates in each age group from the two diseases combined were rather constant over the five quinquennia between 1876 and 1900. As we now know, little has come from a consideration of this hypothesis. Moreover, a longer experience over the years since 1902 has shown that the cancer rates at ages under, say, 45 years have remained relatively constant, while the tuberculosis rates have fallen to very low figures. It may be noted that the examination of this hypothesis led Cherry (1924) to consider the death rates not at a point of time but for a generation. His use of the method had passed quite unnoticed (Lancaster, 1957). It is perhaps fitting to comment on the high level of the discussions by the three authors of the 1902 symposium. Knibbs (1911 and 1912) also gave a discussion of the cancer-tuberculosis death rates, and his interest has survived in the form of a graph showing the crude death rates from the two diseases in the *Commonwealth Year Book*. A bibliography of this topic has been given by Pearl (1929).

Holmes (1925) gave a study of cancer in Australia for the years 1908 to 1923. Unfortunately, he used such measures as the ratio of cancer deaths to all deaths rather than age-specific death rates. As a result comparisons cannot be made even between the earlier and later years of his survey, and it is easily seen that differences in age distributions would have been sufficient

to explain most of the findings, whereas Holmes (1925) concluded that there had been a general and serious rise in the cancer death rates. Similar criticisms can be made concerning his later papers (Holmes, 1926, 1932, 1934 and 1935). Yet Holmes was aware that changes in the age distribution in the population could bring about changes in the crude death rate from cancer.

Cumpston (1929) reviewed the importance of cancer as a public health problem in Australia, using some of the data of Holmes (1925) as illustrative. He pointed out that more than 10% of the persons then alive would die of cancer. He gave a graph of the mortality from cancer by age and sex and noted that aging of the population would lead to an increase in the crude death rates from cancer. Cumpston (1936a) reviewed the trends of mortality from cancer in Australia, using the age-specific rates at the times of the censuses of 1911, 1921 and 1931. He believed that there had not been a general increase in the cancer death rates over these years, but the apparent increases, founded usually on a consideration of crude death rates, were actually due to changes in age distribution. He noted also that there had probably been some transfer of deaths from senility in the earlier periods to cancer in the later periods in the age groups above 70 years. However, among individual cancers, Cumpston (1936b) noted an increase in cancer of the breast in females. In the next section it is shown that in general the death rates from cancer as a whole, summarized by standardization, have not increased, although the crude death rates have increased due to changes in age distribution in Australia over the last 50 years.

#### The Standardized Death Rates from Cancer.

It is often convenient to give a single measure of the cancer death rates. The most commonly used are the crude death rates, which are given in the first column of Table II. They show an increase over the years of the survey for both sexes. However, the crude death rates are most unsatisfactory for comparisons when the age compositions of the populations are variable. So one of the standardized rates is to be preferred as an index of cancer mortality (Lancaster, 1950). These show, as do

TABLE II.  
The Crude and Standardized Death Rates from All Forms of Cancer in Australia.

Period.	Deaths per Million per Annum.			
	Crude Death Rate.	Standardized on the Population of England and Wales, 1901.	Standardized on the Life Table Population of Australia, 1939 Census.	Equivalent Average Death Rate.
<b>Males:</b>				
1908 to 1910	724	713	1540	826
1911 to 1920	808	744	1826	873
1921 to 1930	950	775	1754	838
1931 to 1940	1123	786	1825	775
1941 to 1945	1180	755	1777	716
1946 to 1950	1256	775	1801	760
1951 to 1955	1227	791	1842	781
<b>Females:</b>				
1908 to 1910	715	834	1711	962
1911 to 1920	771	829	1733	939
1921 to 1930	907	849	1813	926
1931 to 1940	1074	831	1813	870
1941 to 1945	1215	835	1833	848
1946 to 1948	1235	804	1766	826
1951 to 1955	1170	759	1674	765

Figure II, that the death rates from female cancer as a whole have been declining since about 1920. Both the population of England and Wales in 1901 and the population of the equivalent average death rate are young populations and do not reflect the increase in the cancer mortality rates before 1920 at the high ages which have already been mentioned. The position is not so favourable in males, and there has even been a slight increase in the cancer rates for males, associated with the recent increases in the mortality from lung cancer.

#### Cancers Peculiar to the Female.

The "Sixth Revision of the International List of Causes of Death", now referred to as the "International Statistical Classification of Diseases, Injuries and Causes of Death (1948)", brings all the malignant tumours of the genitourinary system and the breast together in one subclass, which we shall find convenient to use, although it includes malignant tumours of the kidney and bladder as well as those previously discussed under the foregoing title by Lancaster (1951).

#### Breast.

Numerically, cancer of the breast is the most important in this subclass and, indeed, about one-eighth of all deaths of females from the causes in Class II (Neoplasms) of the "International Statistical Classification" are due to cancer of the breast. Previously there had been increases in the age-specific mortality rates, especially at the higher ages (Cumpston, 1936; Lancaster, 1951 and 1955), but the rates in the years 1946 to 1950 were practically the same as those in 1941 to 1945, and now in the most recent period, 1951 to 1955, the rates are slightly lower. The Australian mortality rates from cancer of the breast given in Table III are lower than those in England and Wales for each age group up to 75 years of age.

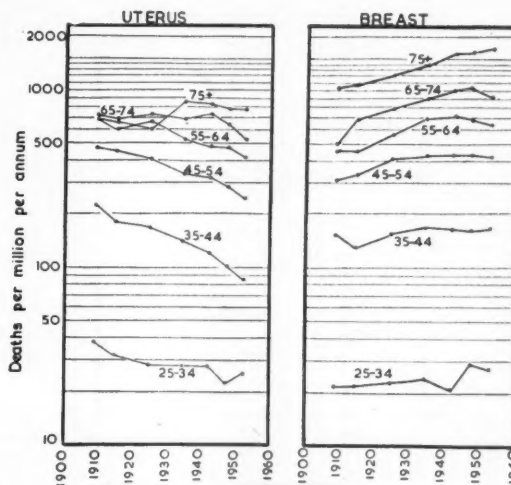


FIGURE III.

The trends in mortality in Australia from cancers of the uterus and of the breast.

In many ways cancer of the breast may be regarded as a test case of the efficacy of treatment. It is an easily accessible cancer and the standards of diagnosis are generally good. Nevertheless, throughout the world dissatisfaction has been expressed at the results of surgical and radiation therapy. Thus cancer of the breast was investigated in 1935 by a committee of the Royal Australasian College of Surgeons and an attempt was made to assess the results of treatment. Newton (1935) discussed the findings of the committee. In most of the series reported, only some 70% of cases were traced up to five years after the operation. A more completely traced series of private patients under Sir Alexander McCormick and Mr. B. T. Edye gave a 64% five-year survival rate for operable cases and 27% for borderline cases. Edye (1935) reviewed some further cases in Stage 2 with a five-year survival rate of 23%. These investigations were hampered as were those of Pullen, Spence, Sharp, Fleming and Cumberland (1955), because they were undertaken retrospectively. However, some of the efficiently performed follow-up surveys of the Mayo Clinic, of Rochester, U.S.A., are also retrospective. We may note the high rate of follow-up in the series of cancers of the uterus of Berkson,



TABLE III.  
Cancers of the Female Genito-Urinary System in Australia, 1951 to 1955.

Age (Years).	Deaths per Million per Annum from Cancers.						Total Genito-Urinary.
	Breast.	Uterus.	Ovary.	Other Genital.	Kidney.	Bladder.	
0 to 4 .. .. .	0	2	0	1	11	0	14
5 to 14 .. .. .	0	0	1	0	1	0	3
15 to 24 .. .. .	0	3	3	0	0	0	6
25 to 34 .. .. .	26	25	14	1	1	1	67
35 to 44 .. .. .	167	82	40	3	5	2	299
45 to 54 .. .. .	424	232	142	8	22	13	840
55 to 64 .. .. .	655	393	224	21	41	44	1378
65 to 74 .. .. .	936	529	254	47	81	112	1959
75 and over .. ..	1672	753	256	157	117	276	3231
All ages .. .. .	242	138	68	11	17	21	492

Harrington, Claggett, Kirklín, Dockerty and McDonald (1957). Using the facilities of the Victorian Cancer Registry, Fowler and McCall (1949) were able to trace 98% of 395 cases of cancer of the breast. In their series combined surgical and radiation therapy gave a five-year

survival rate of 54.6% as against 48.9% for surgery alone. However, this series was not large enough to differentiate clearly between the effects of different treatments. The point to be made here is that for the study of the efficacy of different regimes of treatment units less than a State of Australia in size of population can hardly be regarded as adequate, even with a common cancer such as cancer of the breast. The argument applies more forcibly still to less common cancers. So for an adequate study of the results of treatment a registry on a State-wide basis may be considered as essential.

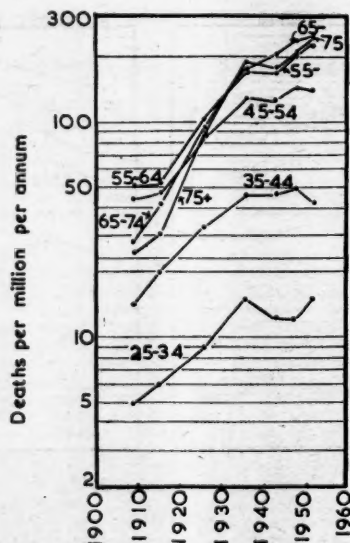


FIGURE IV.  
The trends in mortality in Australia from cancers of the ovary.

#### Uterus.

The mortality rates from cancer of the uterus are given in Table III and in Figure III. The death certificates enable the medical attendant to specify whether the site of cancer is the cervix or the body, but this is not always done. So a breakdown of the cancer of the uterus deaths into cervical or corporeal is not justifiable with the current practices in Australian official statistics. In England and Wales, when the certifier has not precisely certified the site, he is requested to do so in a letter sent by the Registrar-General. The lack of such a practice in Australia constitutes a definite weakness in the system of official statistics.

There has been a general decline in the age-specific mortality rates from cancer of the uterus, especially at the ages 35 to 64 years. In earlier periods cancer of the uterus was a more frequent cause of death than cancer of the breast, but it is now responsible for only about half as many deaths as caused by cancer of the breast. Fowler (1933), Downes (1938), Schlink (1953 and 1955) and Harrison (1957) have recorded extensive experiences, showing the value of surgery and/or radiotherapy in the treatment of cervical cancer. However, it has already been noted by Lancaster (1951) that other factors are possibly involved, such as personal hygiene, marital state

TABLE IV.  
Cancers of the Male Genito-Urinary System in Australia, 1951 to 1955.

Age (Years).	Deaths per Million per Annum from Cancer.						Genito-Urinary.
	Breast.	Prostate.	Testis.	Other.	Kidney.	Bladder.	
0 to 4 .. .. .	0	0	0	0	9	1	11
5 to 14 .. .. .	0	0	0	0	2	0	2
15 to 24 .. .. .	0	1	11	0	1	0	13
25 to 34 .. .. .	0	0	17	0	2	1	21
35 to 44 .. .. .	1	2	8	1	12	4	23
45 to 54 .. .. .	2	26	7	2	35	32	104
55 to 64 .. .. .	6	194	9	9	106	125	448
65 to 74 .. .. .	9	1040	7	12	142	318	1528
75 and over .. ..	13	3575	23	47	181	723	4562
All ages .. .. .	2	149	8	3	23	47	236

and age at marriage. A useful review and bibliography has been given by Berggren (1957), who considers these more general factors.

#### Ovary.

The mortality rates from cancer of the ovary are given in Table III, and the trends of the rates are given in Figure IV. The general rise in the age-specific rates, which was very marked before 1940, seems to have ended. No explanation can be given for these features.

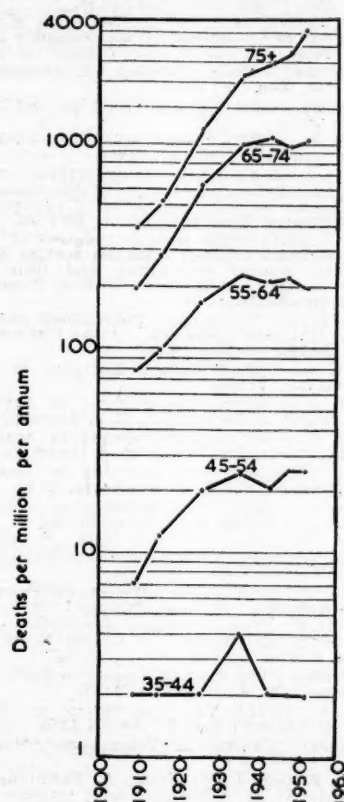


FIGURE V.  
The trend in mortality in Australia from cancer of the prostate.

#### Cancers Peculiar to the Male.

##### Breast.

Cancer of the breast is a comparatively rare tumour, and perhaps five years is too short a span for the computation of death rates. The rates in 1951 to 1955, given here in Table IV, are less than those given previously for 1931 to 1945 by Lancaster (1952).

##### Prostate.

The death rates at ages under 75 years in 1951 to 1955 from cancer of the prostate are of the same order as previously given. There seems to have been some increases at ages over 75 years. Comparisons can be made in Figure V.

##### Testis.

Cancer of the testis, again, is a rather infrequent cause of death. It has an unusual age distribution with a mode at the ages 25 to 34 years.

#### Other Genital Sites.

Cancers of the scrotum and penis are included in cancers of other sites in Table IV. They are unimportant numerically.

#### Kidney.

Cancer of the kidneys appears to be increasing in frequency at the higher ages in both sexes—especially in the males (Figure VI).

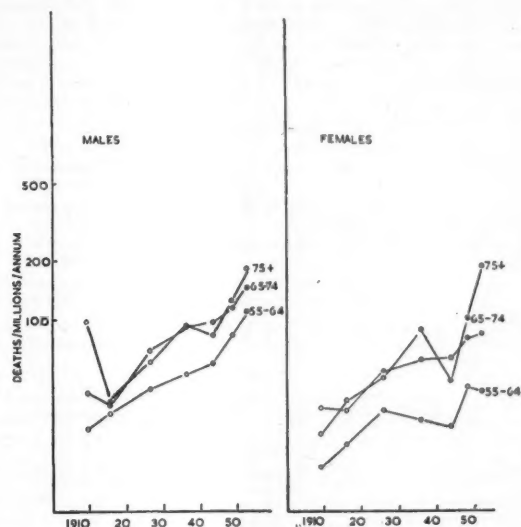


FIGURE VI.  
The trend in mortality in Australia from cancers of the kidney.

#### Bladder.

Cancer of the bladder is also increasing slightly at the higher ages (Figure VII) in both sexes.

#### Summary.

For convenience, the discussion of the statistics of cancer in Australia is divided into two parts. In this first part general problems and cancers of the genito-urinary system are dealt with. It is suggested that a cancer registry is necessary in each State if any ideas are to be formed as to efficacy of treatment. A registry can also give help in the investigation of clinical or epidemiological features of cancer.

The long-term trends in cancer mortality in Australia are noted. There appears to have been only slight changes in the total cancer mortality at the younger ages, but there have been increases at the higher ages. Some of these increases at the higher ages seem undoubtedly to be due to changes in diagnosis and certification, but there also seems little doubt that there have been increases in mortality from individual cancers. Some work in the early part of the century by Allen, Verco and Coghlan is discussed. In particular, the treatment of the "salvage" hypothesis by Coghlan and the use of "generation" methods by Cherry are noted.

The importance of the use of age-specific death rates is stressed, a point neglected by some Australian authors.

In a discussion of individual cancers, it is noted that death rates from cancer of the breast have been practically stationary since 1940, although there had previously been increases. The death rates from cancer of the uterus have been falling, especially at the lower ages. Death rates from cancer of the ovary have been increasing. Among the cancers peculiar to the male, only cancer of the prostate is of numerical importance, and the death rates from this cancer appear to be stationary now, except

over 75 years, after increases in past years. There appear to be increases in mortality from both cancer of the kidney and cancer of the bladder.

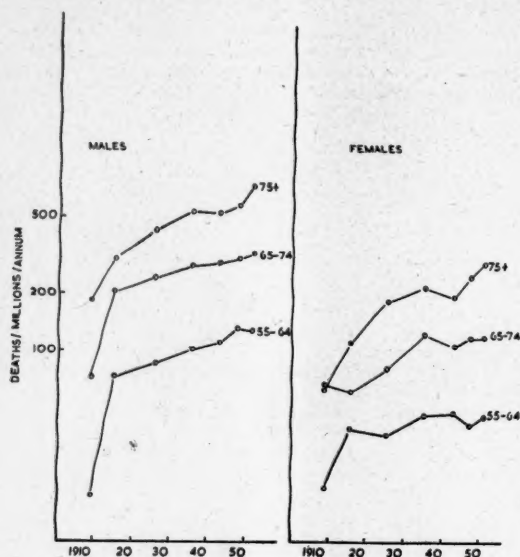


FIGURE VII.

The trend in mortality in Australia from cancers of the bladder.

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#### ANURIA, ALIAS ACUTE RENAL FAILURE: THE GENERAL PRINCIPLES OF PATHOGENESIS AND TREATMENT.<sup>1</sup>

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By anuria we mean acute renal failure in which there is usually oliguria and only very rarely no urine at all. Providing the urine flow exceeds 400 millilitres per day, then normal kidneys can excrete the body's usual daily

<sup>1</sup>Being the substance of various lectures given at Sydney Hospital.



wastes; but if there is less than 400 millilitres or thereabouts, then even kidneys which are perfectly efficient are unable to concentrate the daily wastes into so small a volume, and substances which should have been excreted are retained in the body. This is renal failure. If the kidneys are not 100% normal to start with, then they may not be able to concentrate the daily waste substances into anything less than, say, 800 millilitres; in that case there would be renal failure if the daily urine volume fell below 800 millilitres.

Let us consider why kidneys fail acutely in this way, what effects are produced, and how patients suffering from this condition should be treated. We are here interested mainly in grasping the general principles which are involved, rather than discussing the finer details which are to be found elsewhere (Merrill, 1955; Edwards, 1957).

#### Causes.

Our knowledge of the way in which kidneys perform their task makes it easy to suggest possible causes of renal failure. The two kidneys of the body are served by large vessels carrying blood from the aorta and returning it to the inferior vena cava. Urine produced by the kidneys is conducted by the two ureters to the bladder for storage before being passed *per urethram* to the exterior (Figure 1).

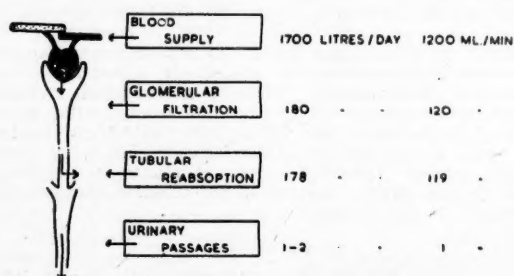


FIGURE 1.

Steps in the mechanism of urine formation, where disturbances may cause anuria.

The total function of the kidneys is made up by contributions from innumerable units or nephrons, each of which is supplied by blood which passes through a glomerular tuft. A filtrate of blood is formed by the glomerulus and flows along the tubule, where the great bulk of it is reabsorbed into the blood-stream. What little remains passes on as urine through the urinary passages. Thus, the proper excretion of urine depends on four important features (Figure 1). The first is blood supply, normally 1700 litres per day, which is 1200 millilitres per minute. The second is glomerular filtration; normally 180 litres of filtrate are produced each day, about 120 millilitres per minute. The third is tubular reabsorption, by which some 178 litres of filtrate are daily reabsorbed, that is, 119 millilitres per minute. And fourthly there is the passage of urine along intact conduits, normally one or two litres per day or about one millilitre per minute. But if less than 400 millilitres of urine are passed in the day, then the kidneys have failed in their function of ridding the body of its accumulating rubbish.

Why might failure occur? Obviously one reason could be a gross reduction in blood supply. Another could be impaired glomerular function: it would have to be very

extensive. A third cause could conceivably be excessive tubular reabsorption—even a small proportional increase. And finally there could, of course, be a blockage anywhere along the urinary passages. All these can and do at times cause renal failure, but probably the commonest of them is excessive tubular reabsorption (Oliver *et alii*, 1951). This occurs when tubular cells are so damaged that glomerular filtrate is apparently unrestrainedly reabsorbed. The damage is caused most commonly by an interruption, even if temporary, in blood supply, leading often to the pathological state of acute tubular necrosis or what used to be called lower nephron nephrosis. Cellular necrosis is often found in the distal part of the tubule, but sometimes in the more proximal parts only, especially as a result of some poison. Commonly, necrotic lesions occur at intervals throughout the whole nephron. The commonest clinical causes of acute renal failure are set out as follows:

1. Circulatory insufficiency: Haemorrhage, surgical and obstetrical shock, burns, crush injuries, dehydration by vomiting and diarrhoea.
2. Intravascular haemolysis: Incompatible blood transfusion, blackwater fever, the use of tap water during surgery on the bladder, septic abortion (*Clostridium welchii*).
3. Renal disease: Acute glomerular nephritis, pyelonephritis, poisons (mercury, carbon tetrachloride).
4. Obstruction of urinary tracts: Stone, blood clot, tumour, sulphonamide crystals, infection, ligation of ureters.

#### Effects.

Normal kidneys, passing adequate amounts of urine, serve the body in matters of fluid balance by excreting excess water; of acid-base regulation by excreting excess acids and conserving base; of disposal of waste substances and maintenance of proper concentration of salts by excreting urea, creatinine, sulphates etc., and surplus quantities of potassium and sodium. In renal failure, with inadequate amounts of urine being excreted, these services are likely to be disrupted with the consequences shown in Table I.

Ingestion of the usual daily quota of fluid will inevitably lead to overhydration. Clinically this may become manifest as oedema and as an overloaded circulation with raised blood pressure and distended veins. Pulmonary oedema and cardiac failure may occur. One of the best guides to the changing state of hydration is provided by serial measurements of the body weight. Additional indications are the decreasing haematocrit, haemoglobin concentration and plasma protein concentration, which reflect the dilution caused by water accumulation. A cumulative fluid balance, where net daily totals are added each day, is also useful, but less accurate than daily weighing.

Failure to excrete the acidic substances being formed continuously during metabolic activity, and perhaps ingested, leads to acidosis, which will become clinically evident as hyperpnoea. A biochemical measure of it is to be found in the decreased serum bicarbonate concentration.

The accumulation of urea and other substances which would normally be excreted in the urine induces the condition of uraemia with its blurred cerebral function, headache, twitching, anorexia, nausea and perhaps vomiting. Although not attributable solely to urea or creatinine, the concentration of these easily-measured items gives some indication of the severity of uraemia and of the changes occurring during the progress of the disease. The potassium from ingested food and from damaged body cells causes hyperkalaemia, which, if severe, will lead to muscular weakness or even to cardiac weakness and irregularity. The concentration of potassium in the serum will rise above 4.5 milliequivalents per litre, and one or more leads in the electrocardiogram may show the T wave becoming taller, tent-fashion, dragging the ST segment with it. If sodium continues to be ingested, then it, too, must be retained.

Those are the primary effects of acute renal failure, the ones one would expect. The extent to which they occur depends on the severity and duration of the oliguria as well as on treatment. Other effects occur which are not

TABLE I.  
The Possible Effects of Disturbed Renal Function in Anuria.

Kidney Function.	In Normal Subjects. Daily Loss.	In Subjects with Anuria.		
		Dangers.	Symptoms and Signs.	Indices.
Fluid balance .. .. .	Water (one to two litres).	Overhydration.	(Edema, hypertension.	Increasing body weight, decreasing haematocrit, decreasing haemoglobin and protein concentrations.
Acid-base balance .. ..	Acids.	Acidosis.	Hyperpnoea.	Decreased serum bicarbonate concentration.
Excretion of wastes .. ..	Urea (15 grammes), etc.	Anæmia.	Mental changes, loss of appetite, nausea, vomiting.	Increased blood urea and creatinine concentrations.
Regulation of salts ..	Potassium (three grammes).	Hyperkalemia.	Muscle weakness, cardiac irregularity.	Raised serum potassium concentrations, electrocardiographic changes.
	Sodium (four grammes).	Hypernatremia.	Venous engorgement, hypertension, paroxysmal dyspnoea.	Raised serum sodium concentration.

so easily explained, for example, anæmia; and there may be other features attributable to the initiating cause, such as septic abortion, or to complications which may develop later, such as infection of the urinary tracts. After the period of anuria or oliguria, providing the patient survives, there is gradual recovery of renal function with reestablishment of urinary flow and an off-loading of the accumulated water and substances awaiting excretion. As may be expected, complete recovery is not instantaneous and all of the kidney's many functions do not improve in unison. The course of the diuresis is unpredictable. It may be restrained or massive; there may be persisting retention or excessive loss; and the resultant effects on water, potassium and sodium may differ.

#### Treatment.

First and foremost in treatment is prophylaxis, the avoidance or prevention or at least strict supervision of all conditions liable to cause renal failure: meticulous care in cross-matching blood; prevention, or else prompt and efficient treatment of shock, hæmorrhage and dehydration; avoidance of tap water for irrigating the bladder after prostatectomy, and so on. After prevention, thought should be given to the cause of the anuria, it should be investigated as necessary and then treated.

As for treatment of acute renal failure itself, there is no known form of treatment which helps to cure damage in the kidneys. Therefore, our aim must be to keep the patient alive, to deal with troublesome symptoms and to avoid giving anything which normally is eliminated in the urine, e.g. streptomycin.

Therefore, treatment of the established condition involves sustenance to maintain food and fluid balance, the correction of any disorders in balance which have developed during the period of oliguria, and then careful and watchful management of the diuretic phase which ensues.

The main points in the treatment of acute renal failure before diuresis occurs may be tabulated as follows:

#### 1. Prophylaxis and Treatment of the Cause.

#### 2. Sustenance and Maintenance of Balance.

Water: 400 millilitres per day *plus* volume of overt losses (urine, vomitus, faeces).

Food: No protein, sodium or potassium; 1000 Calories or more daily. Sugar: glucose sweets or drinks, lemonade, ginger ale, rice. Fat: cream, saltless butter balls, fat emulsions (e.g., "Nucrose"). Vitamins. Alcohol.

#### 3. Correction of Imbalance.

Overhydration: Restricted fluid intake. Artificial kidney.

Acidosis: Artificial kidney.

Uræmia: Artificial kidney. Symptomatic treatment of vomiting, restlessness, convulsions, etc.

Hyperkalemia: As an emergency: glucose and insulin; calcium gluconate; digitalis; or artificial kidney. Ion-exchange resin.

Hypernatremia: Artificial kidney.

Anæmia: Exchange transfusion if necessary.

A strict regime of treatment should be imposed immediately the diagnosis is made or even suspected, for the prevention of gross disabilities is easier than their correction. One of the most frequently encountered difficulties in the diagnosis of acute renal failure is to distinguish simple oliguria due to dehydration, usually post-operatively, from true renal tubular necrosis caused by dehydration, shock and other factors which may have been present during the illness and operation. Useful guides here are the specific gravity of urine and the concentration of urea in urine. In simple dehydration the specific gravity usually exceeds 1.020, whereas with renal damage it is less than 1.014. In like manner the urea concentration exceeds 2% in simple dehydration, and plenty of fluids should be given as treatment, whereas with acute tubular necrosis the urea concentration is less than 2% (Joeke *et alii*, 1957). Alternatively, a test load of water can be given, say two litres within a few hours. Urine output should increase substantially if simple dehydration exists, but not if pathological changes have occurred in the kidneys.

#### Sustenance.

Sustenance for the anuric patient must include water and food. Excess water should be avoided like poison; one litre per day, though commonly advocated, is excessive. Taking into account the unmeasurable loss of water through skin and breath and the gain of water from the metabolic use of food or bodily fat, then water balance can usually be maintained by giving the patient 400 millilitres of fluid per day *plus* an extra volume equal to the sum of any measurable losses such as vomitus, urine or diarrhoea. There may be 150 millilitres or so of water in the food which is given to the patient, leaving only 250 millilitres (*plus* overt losses) to be taken as free fluid. Thirst and dryness of the tongue are unreliable indices of underhydration in uræmia, and one should resist the temptation to give extra fluid. Body weight is the best available guide to changes in hydration; it falls steadily, at the rate of about one pound per day in well-treated acute renal failure, due to loss of flesh and fat. If weight does not decline or, worse still, if it increases, then it is quite certain that the patient is getting too much fluid.

As for food, ideally there should be an intake of at least 1000 Calories per day in a form which is palatable and recognizable as food and which leaves no waste substances requiring excretion through the kidneys. Thus, the food should be comprised of carbohydrate and fat, together with ample vitamins, and should contain no protein, potassium or sodium. This is difficult. It means that a diet consisting mainly of rice, cream, sugar, tinned

peaches or cherries, with supplements of proprietary fat emulsions, barley sugar and saltless butter balls is necessary. The daily quota of fluid can then be made up with lemonade or ginger ale, 20% glucose solutions or sweetened tea. In some instances feeding through a Ryle's tube is necessary, in which case glucose solution with peanut oil is the standby. Sometimes alcohol is useful; 50 millilitres of brandy supply 100 Calories.

#### Correction.

If the patient is overhydrated, and it is not unusual for patients to be overhydrated to the extent of five or even 10 litres, then water can be removed by treatment with an artificial kidney. Otherwise, reliance must be placed in slow correction over a number of days by restriction of the intake of fluid still further.

Acidosis can be truly corrected only by removal of the offending acids by dialysis in an artificial kidney. Partial neutralization by the infusion of sodium lactate or bicarbonate may be necessary if the acidosis is particularly severe and troublesome; the disadvantage is that it necessitates adding sodium to the body, which we try to avoid.

Similarly, for uræmia the only true corrective is to remove the urea and other accumulated substances, as can be done with the artificial kidney. Coma and other distressing features are alleviated, often quite remarkably. Otherwise treatment is purely symptomatic: a reduction in fat or some other adjustment of diet, or the exhibition of chlorpromazine for nausea and vomiting; paraldehyde or amylobarbitone (or any other hypnotic which does not require urinary excretion for its elimination) for restlessness and mental unrest; calcium gluconate for tetany, twitching or convulsions, or magnesium sulphate (intramuscular injections of one or two millilitres of a 50% solution, perhaps four times a day); reserpine or hexamethonium for hypertensive episodes.

Hyperkalemia may demand emergency treatment. Again, the excess can be removed through an artificial kidney. Or it can be driven into cells by the administration of glucose by mouth or intravenously, covered by insulin, one unit for each two grammes. Or it can be counteracted by calcium, by the infusion of 100 millilitres or more of 10% calcium gluconate solution per day. Finally, the irritability of the heart to potassium can be reduced by digitalization. However, in most cases urgent action is not required and hyperkalemia can be successfully corrected or kept within bounds by the administration of an ion-exchange resin by mouth, five to 15 grammes of "Resonium-A", three or four times in the day.

Correction of anæmia is difficult and is rarely required. The hæmoglobin level usually remains about eight to 10 grammes per 100 millilitres of blood. If anæmia is severe or is causing symptoms, then packed cells should be given in exchange for an equal volume of the patient's blood.

With proper sustenance and judicious correction, patients have been carried successfully through periods of oliguria as long as three months. In most instances this phase lasts only seven to 14 days before giving way to the diuretic phase. Strict and intelligent conservative treatment is usually adequate, but the obvious benefits to be derived from the use of an artificial kidney are substantial and sometimes life-saving. All punctures and tubes—stomach tubes, urethral catheters and intravenous tubes—should be avoided unless absolutely necessary.

#### Diuretic Phase.

After the drought there is likely to be a flood, bringing new dangers in place of the old. There are no hard and fast rules for the proper management of this difficult phase beyond emphasis of the need for careful observation of the clinical state of the patient and of the state of balance of fluid and electrolytes while the restrictions on water and food are gradually being relaxed. The principles

of treatment in the diuretic phase may be set out as follows:

Water: Increase intake, but later allow of excess output to get rid of accumulated water. Beware of dehydration.

Potassium: Increase intake; unrestricted when urine volume exceeds 1500 millilitres daily. Beware of hypokalemia.

Sodium: Allow increased intake. Beware of retention or excessive loss.

Food: Increase gradually.

Complications: Beware of infections, thrombosis, etc.

A continuing watch must be kept on the indices mentioned previously—body weight, blood pressure, fluid balance, concentration of electrolytes—to detect any evidence of retention or, more likely, of an excessive loss causing a sudden swing in the opposite direction. Appropriate treatment, such as a supplement of potassium if necessary (25 grammes of potassium citrate or potassium bicarbonate by mouth three times a day), can then be given. A large urinary output facilitates the removal of the accumulated wastes and can be encouraged initially by balancing the intake of fluid against the losses. After three or four days it is often wise not to force fluids, and to allow intake to fall short of output so that any overhydration, which is practically inevitable in this condition, can be corrected. Sodium restriction is continued during early diuresis. If body weight and blood pressure are satisfactory, sodium is then gradually reintroduced to the diet.

Complications are prone to occur in this stage of the disease and must be guarded against and treated; special watch should be kept for pulmonary and urinary infection and femoral thrombosis. Anæmia may persist and delay healing of wounds or infections. Blood transfusion in the late diuretic stage usually produces lasting improvement in hæmoglobin levels.

#### Summary.

Acute renal failure is most commonly caused by conditions which are preventable, so that every care should be taken to avoid incompatible blood transfusions, shock, excessive loss of blood in surgery and dehydration from vomiting and diarrhoea.

Once acute renal failure, as indicated by a daily urinary loss of less than 400 millilitres, is established or even suspected, then the probable cause should be treated promptly and efficiently and a strict control of the intake of fluid and food instituted. This control should be along the lines outlined here so that the body may be sustained with as little stress as possible till the kidneys recover. Probably as many deaths in this condition are attributable to bad management—too much water, too much potassium, too little nourishment—as to the primary disease itself. Dialysis with an artificial kidney is a useful method of treatment. It is the most rational form of treatment in that it actually removes the accumulated toxic substances and it has been proved to be safe and effective.

With intelligent treatment the anxiety and alarm aroused by continuing anuria should give way to a more confident and hopeful expectancy. The majority of cases so treated recover, and the recovery of renal function is remarkably complete.

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## Reviews.

**Homosexuality: A Subjective and Objective Investigation.** British edition edited by Dr. Charles Berg, M.D., American edition edited by A. M. Krich; 1958. London: George Allen and Unwin, Limited. 8½" x 5", pp. 416. Price: 30s. (English).

This book includes a number of autobiographies, letters and case records of homosexuals, followed in the second part by papers, mostly reprints, by medical contributors. The late Dr. M. Hirschfeld argued for a "deeply underlying constitutional predisposition" and called attention to the strength of the homosexual urge in the face of cultural influences towards heterosexuality and social prohibitions. He held that genuine homosexuality could not be acquired through external conditions and discounted the effects of early seduction of children by adult inverters. C. Bergler criticizes the Kinsey report for neglect of the dynamic unconscious. He maintains that unconscious factors determined the volunteers and their friends to come forward and give evidence, which is not to be regarded as reliable in all cases. According to Bergler, psychoanalytically the homosexual is to be regarded as a "frightened fugitive from the misconceptions he unconsciously builds about women". Kinsey pleaded for acceptance of homosexuality as a biological fact, whereas Bergler regards it as a neurotic disease remediable by psychoanalysis. Kinsey for his survey introduced a rating scale of six degrees between exclusive heterosexuality and homosexuality. G. S. Sprague in "Varieties of Homosexual Manifestations" describes eleven types, including the "Don Juans who seek by over-compensation to avoid disquieting self-discovery". In a comment on this paper K. Menninger stresses the need to distinguish between overt homosexuality, which can be exposed under various conditions, and the internal trends which are "necessary to the organism". Clara Thompson, in contrast to views expressed by several other contributors with psychoanalytic leanings, regards homosexuality as a manifestation of a more general character problem. It may be latent—universal and not necessarily pathological—repressed or overt. Different origins are to be sought in different cases. C. Berg, in his editorial foreword, contributes an admirable survey of the problem, and his co-editor, A. M. Krich, concludes by stating that "the beginning of Knowledge is to know what we do not know".

**Understanding Your Patient.** Edited by Samuel Liebman, M.D.; 1957. Philadelphia, Montreal: J. B. Lippincott Company. Sydney: Angus and Robertson, Limited. 9" x 5½", pp. 180, with two illustrations. Price: 55s.

As stated in the preface, this volume is based on a series of lectures given by several psychiatrists and others at the North Shore Hospital, Winnetka, Illinois (of which Liebman is Medical Director), on "The Medical Practitioner's Contributions toward Healthy Emotional Development: The Physician as a Counsellor". The aim of the lecturers is to help their non-psychiatric colleagues to recognize emotional problems and to approach them more understandingly. With some exceptions, the contributors achieve their aim admirably, and there is a need for books such as this.

The first lecture is a statesmanlike utterance by Daniel Blain, Medical Director of the American Psychiatric Association, on "The Unique Position of the Physician in Our Society". This chapter helps us to understand ourselves and our role, and strikes a skilful blow at our impersonal materialistic approach with the emphasis on laboratory tests, and at the proliferation of segmental, narrow specialist practice. The second chapter, by Rosenbaum and Cohen, deals helpfully with the psychological preparation of the individual for medical and surgical care. The third, on problems in early development, by Lauretta Bender, would be more useful to psychiatrists themselves, and is too highly technical for a book of this nature. Chapter four, by George L. Perkins, is a rather sketchy survey of the emotional conflicts of the school-age child. Chapter five, on the problems of the teenager, by Frederick K. Allen, is excellent, and part of it is worth quoting: "Too many in our culture carry into their adult life the confusions nourished in childhood and revealed in the adolescent period. Therefore, the problems of the teenager constitute one of our major social problems. The more our understanding of the whole growth process can be incorporated into our social institutions—family, school, medical practice, church, social agency, etc.—the more strength can be furnished our youth to help them gain that inner sense of values about themselves, first as an individual but always as a creative member of the group."

Chapter six, by C. Knight Aldrich, is particularly helpful to general practitioners. It summarizes the common emotional problems in adults and how to manage them, and is supported by some very good case histories. Premarital counselling is dealt with admirably by Emily Mudd in chapter seven. She emphasizes that a premarital check-up should be undergone by all engaged couples, and should give the doctor a unique opportunity in preventive medicine—that is, in forestalling future marital problems, both physical and emotional. It is unfortunate that few doctors conscientiously avail themselves of this opportunity, when perhaps they, of all members of the community, can do it best. Chapter eight, on marriage counselling, by Robert W. Laidlaw, is also most stimulating, and includes a practical method by means of which the doctor can educate himself in the techniques of marriage counselling.

The book concludes with a thoughtful and sympathetic chapter entitled "Problems Related to Grandparents", by Erich Lindemann, in which he discusses the fate of the older generation after their children have married. *Inter alia*, he states: "At a time when they are most in need of reassurance by the members of the family to whom they are related through bonds of affection and mutual understanding, their contribution becomes unimportant and their skills become unwanted. Often this parallels or only shortly precedes the time when their operations in their professions or jobs become unwanted and when the woman's activity in community groups appears to be less valued. At worst they may find themselves relegated to old people's clubs and the object of well-meaning occupational therapy."

This book has a good, detailed index.

**Australia in the War of 1939-45. Series 1, Army, Volume 4: "The Japanese Thrust",** by Lionel Wigmore; 1957. Canberra: Australian War Memorial. Sydney: Angus and Robertson, Limited. 9½" x 6", pp. 736, with many illustrations. Price: 30s.

In Volume 4 of the history of Australia in the war of 1939-1945, which is entitled "The Japanese Thrust", Lionel Wigmore has done an excellent job of work. Notable throughout the book is the impartial presentation of the many very controversial aspects of the peculiar conduct of the various campaigns, and especially of the Malayan campaign. Wigmore appears to have presented enough of the relevant background data, but makes no comments, leaving the reader to draw his own conclusions. The result is most satisfying. His history of the actual campaigns, thrusting as they did into so many parts of the south-west Pacific region, is well linked together, and gives a useful over-all picture. Actual battle details there are in plenty, yet the view is not too microscopic. The descriptions of Japanese treatment of wounded and of prisoners-of-war is dispassionate and factual, which is most welcome; it is tempting to become emotional over these, but Wigmore's restraint is much more effective. If there is any defect, it is in the wide use of one exaggerated and distorted source of information regarding life and behaviour in the prisoner-of-war camps. Apart from the wrong impressions given by quotations from this source, the whole picture is authentic and convincing. The volume adequately complements Allan S. Walker's outstanding medical histories. Production is excellent.

**Allergy in Pediatric Practice.** By William B. Sherman, M.D., and Walter R. Kessler, M.D., Ph.D.; 1957. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical), Limited. 9½" x 6½", pp. 296, with many illustrations. Price: \$5 is. 9d.

This excellent book may conveniently be divided into two sections. The first, extending to chapter 10 and page 183, covers the theoretical and immunological concepts of allergy and allergic disorders, with full and sensible instruction in the application of theory to practice in a general way. The second section, from chapter 11 to the end of the book, is more descriptive of the various disorders which have, or are believed to have, an allergic aetiological basis, with abbreviated and, perhaps, over-simplified descriptions of therapeutic measures employed.

Of the two sections, the first is by far the more satisfying. It is, indeed, the most clear and convincing exposition of this subject that we have encountered. Much experimental data and some historical facts have been included, and both are blended with logic into the author's viewpoint to give a very readable and understandable picture of the various types of allergic reactions. The chapter on drugs is useful in containing good advice on the various drugs and therapeutic agents described. However, one feels that there are other agents, not described, which merit inclusion. For

instance, sedatives or tranquillizing agents are barely mentioned. Chapter 5 and chapter 6, which are concerned with anaphylaxis, serum sickness and serum reactions, are ones which should be read by all practising physicians.

The second section, though admirable for the general practitioner in its coverage of the multitude of allergic disorders, falls short, one considers, in that the technique of management is not wide enough. Admittedly, the majority of sufferers from these disorders will respond to the treatment advised, but there will always be that difficult minority, for whom the whole gamut of therapeutic knowledge must be tried, who will be unimproved on the simple measures indicated. To overcome this deficiency, the book would have had to be much enlarged, and perhaps some confusion would then result. As always, this minority will continue to frequent the offices of those who spend their lives in an effort to help the allergic sufferer. One final criticism is that the part played by emotional stresses in allergic individuals, though not omitted, has been played down too much. At least in children, emotional factors are always present and may require just as much management as the truly allergic.

This book is one that can be confidently recommended to all practitioners as being the best on the subject that we have seen. It will explain many difficult and ill-understood phases of allergy and give a most satisfactory ritual for the investigation and management of the allergic disorders in childhood.

**Microscopic Anatomy of the Temporal Bone: A Photographic Survey of Serial Sections of the Temporal Bone Cut in the Three Routine Planes of Sectioning Human Specimens.** By Dorothy Wolff, A.B., M.A., Ph.D., Richard J. Bellucci, B.S., M.D., and Andrew A. Eggston, B.S., M.D.; 1957. Baltimore: The Williams and Wilkins Company. Angus and Robertson, Limited. 9" x 7½", pp. 423, with 198 illustrations. Price: £6 17s. 6d.

Few laboratories can supply microscopic sections of the temporal bone for study. Demand for a manual of serial sections of this structure has led to the preparation of this volume of 405 pages devoted to the description of 199 photomicrographs cut in three series: horizontal, vertical in the long axis of the petrosa, and vertical but at right angles to that axis. Each main series is composed of three subseries: from the adult, from the infant, and isolated enlargements to illustrate important details. There is also a series of sections showing the organ of Corti of the monkey, since the details thus demonstrable are difficult or impossible to obtain from human material.

The student otologist and the practising surgeon alike will find a clear answer to finer details of surgical anatomy in the study of this work. Such questions as "how much space is there around the membranous labyrinthine structure to be allowed for in performing a fenestration?" can be clearly envisaged in various locations. The variation in cellular structure and bony density in the petrous pyramid is impressively shown in sections from several different subjects, providing information and food for thought when inflammation in these parts may be suspected and perhaps surgical exploration may need to be undertaken. The course and relations of the chorda tympani and of the petrosal nerves may be revealing to the thoughtful in considering some of the vague pains and functional disorders which at times tax the ingenuity.

In the series of vertically cut sections the size and location of the membranous labyrinthine structures relative to the bony vestibular structure are again clearly and usefully shown, for this is a prime consideration in modern labyrinthine operations such as fenestrations and stapes mobilization. It is interesting to be reminded from pictures and text that the long axis of the cochlea lies in a horizontal plane and that the basilar membrane with the organ of Corti is in a vertical plane. We are accustomed from diagrams and restricted microscopic sections to regard these parts of the hearing mechanism as lying horizontally with the scala tympani below the basilar membrane and the scala vestibule above it. The true orientation of these parts might well give rise to more accurate physiological reasoning.

It may seem ultra-critical to find faults with results of such a painstaking task as the production of this magnificent work must have been, yet it is a pity that whole anatomical models or diagrams have not been included here and there to complete the mental image to be formed of the parts shown in section. A more enduring appreciation of the living arrangement of these complex parts might be thus assured. This is a beautiful book, a "must" for every library and for the student of otology. It would be spoiled with inclusion in the same covers as pathological studies. Here is pure anatomy, illustrated in the most accurate manner through

wonderfully reproduced photographs of the parts as they really exist. The authors have provided something which is needed, and must be congratulated for their skilful efforts and great enterprise.

## Notes on Books.

**Topics in Psychiatry.** Edited by T. Ferguson Rodger, R. M. Mowbray and J. R. Roy; 1958. London: Cassell and Company, Limited. 8½" x 5½", pp. 278. Price: 20s. (English).

This book is an edited account of the proceedings of a specialist conference in psychiatry held in Glasgow in October, 1957, under the auspices of the Post-Graduate Medical Education Committee of the University of Glasgow and the Royal Faculty of Physicians and Surgeons of Glasgow. The foreword states that in arranging the programme for the conference it was decided to select areas of psychiatry in which there had been recent significant changes in outlook, but more particularly areas in which viewpoints had begun to converge. A few years ago these approaches might well have seemed irreconcilable and fundamentally opposed, but now there is cooperation between those concerned in seeking a solution. The book is not a text-book, nor does it pretend to review the whole field of psychiatry, or even to deal systematically with the topics discussed. Of the 26 contributors listed, most come from the west of Scotland. The contributions are in five sections, dealing respectively with schizophrenia, psychosomatic medicine, tranquillizing drugs, mental deficiency and biochemistry and genetics.

**The Brain and Human Behavior;** 1958. Baltimore: The Williams and Wilkins Company. 9" x 5½", pp. 575, with 200 illustrations and 53 tables. Price: £8 5s.

THIS is Volume 36 of the Research Publications of the Association for Research in Nervous and Mental Disease and consists of the proceedings of the meeting of the Association held on December 7 and 8, 1956. It contains 21 papers dealing with the general subject of the brain and human behaviour from various viewpoints. With each paper is published an account of the discussion which followed its original presentation.

**The Year Book of Orthopedics and Traumatic Surgery (1957-1958 Year Book Series).** Edited by Edward L. Compere, M.D., F.A.C.S., F.I.C.S., with a section on plastic surgery edited by Neal Owens, M.D., F.A.C.S., F.I.C.S.; 1958. Chicago: The Year Book Publishers. 7½" x 4½", pp. 646, with 228 illustrations. Price: \$7.50.

An interesting innovation in this edition of this Year Book is a separately prepared and edited section on plastic surgery. The editor of the new section is Dr. Neal Owens, Professor of Clinical Surgery at Tulane University School of Medicine. This section has chapters dealing with reconstruction, tissue transplantation, burns, congenital anomalies, neoplasms, cosmetic surgery and miscellaneous subjects. The main section on orthopaedics has chapters dealing with anatomy, physiology and pathology, congenital deformities, the epiphyses, poliomyelitis, osteomyelitis and other infections, tumours, cysts and fibrodysplasia, arthritis, rheumatism and gout, fractures, dislocations and sprains, amputations and prostheses, surgical and diagnostic techniques, instruments, appliances and bone banks, calcium and phosphorus diseases of bone, geriatric orthopaedics, and four chapters in which the abstracts are grouped anatomically. Edward L. Compere, who has been editing this Year Book for the past ten years, has produced yet another volume which will be most acceptable to all who are interested in orthopaedic surgery and plastic surgery.

**The Year Book of Dermatology and Syphilology (1957-1958 Year Book Series).** Edited by Rudolf L. Baer, M.D., and Victor H. Witten, M.D.; 1958. Chicago: The Year Book Publishers. 7½" x 5", pp. 496, with 62 illustrations. Price: \$8.00.

FOLLOWING the customary plan with this particular Year Book, the editors, R. L. Baer and V. H. Witten, present a comprehensive introductory article on allergic eczematous contact dermatitis. This is Part II of a review, the first part of which appeared in last year's "Year Book of Dermatology and Syphilology", and deals with methods of testing, prophylaxis and treatment. The abstracts selected are arranged in sections dealing with treatment and prevention, eczematous



dermatitis, atopic dermatitis and urticaria with allergy, drug eruptions, miscellaneous dermatoses, cancers, precanceroses and other tumours, fungous infections, other infections and infestations, venereal diseases and their treatment (exclusive of gonorrhoea) and other investigative studies. In this edition of the Year Book, the editors have placed some of the abstracts of investigative studies with the clinical reports to which they pertain; all the investigative studies are no longer in one chapter as in previous editions, although this chapter is still quite lengthy. The Year Book continues to be a valuable guide to current ideas and developments in dermatology.

**The Proceedings of the Medico-Legal Society of Victoria during the Years 1955 to 1956.** Edited by G. H. Lush, LL.B., and Kenneth J. Grice, M.D., M.R.C.P., F.R.A.C.P.; Volume VII; 1957. Melbourne: Brown, Prior, Anderson, Proprietary, Limited. 8½" x 5", pp. 171. Price not stated.

THE Medico-Legal Society of Victoria is, so far as we know, the only flourishing society of its kind in Australia, and this volume of its proceedings makes it easier to understand why it has survived. A series of interesting and useful papers have been presented during the year covered by the volume, and the range of subject matter can be seen from the type of articles: "Professional Privilege, or Can't You Keep a Secret?", by Mr. R. A. Smithers, Q.C.; "The Mental Content of Negligence", by Judge J. G. Norris; "Professional People", by Dr. G. R. Weigall and Mr. D. I. Menzies, Q.C.; "Medicine and the Law in India", by Sir Lionel Horwill; "Capital Punishment", by Dr. J. K. Adey; "Law Enforcement in the United States of America", by Mr. Justice J. V. Barry; "Truth Drugs", by Dr. A. D. Meares. The concluding contribution is a particularly witty speech by Professor Maurice Ewing, which he delivered in proposing the toast of the legal profession at the annual dinner of the Society on July 28, 1956. This volume will be welcomed by many doctors, and will perhaps serve to revive general interest in medico-legal matters.

**Antenatal Illustrated: The Natural Approach to Happy Motherhood.** By Grantly Dick Read, M.A., M.D.; Second Edition; 1958. London: William Heinemann (Medical Books), Limited. 8" x 5½", pp. 64, with many illustrations. Price: 4s.

In preparing the second edition of this little book, Dr. Grantly Dick Read has added material designed to answer, as far as possible, the stream of questions from doctors, teachers and mothers. He has not, however, attempted to cover the ground in detail, as this is dealt with in larger and older books. Doctors who are looking for something suitable to put in the hands of their patients, and who adopt in their obstetric practice the principles for which Dr. Read is well known, will find this little book useful.

## Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Mycoses of Man and Animals", by R. Vanbreuseghem, M.D.; translated by J. Wilkinson, Ph.D., F.L.S.; 1958. London: Sir Isaac Pitman and Sons, Limited. 9" x 6", pp. 248, with 48 illustrations. Price: 75s. (English).

This is a translation of Part III of the second edition of Langeron's "Précis de Mycologie", published in 1952.

"The First Ten Years of the World Health Organization"; 1958. Geneva: World Health Organization. 9½" x 7", pp. 548, with 28 pages of photographs. Price: 25s. (English).

A comprehensive account of the history and work of the World Health Organization.

"Speech Recovery After Total Laryngectomy"; Part I by C. J. Hodson, F.R.C.P., D.M.R.E., F.F.R., and Part II by Miss M. V. O. Oswald, F.C.S.T.; 1958. Edinburgh and London: E. and S. Livingstone, Limited. 7¼" x 5", pp. 36, with illustrations. Price: 2s. 6d. (English).

The authors are, respectively, a radiologist and a speech therapist.

"Young Children in Hospital", by James Robertson; 1958. London: Tavistock Publications, Limited. 7¼" x 4½", pp. 115. Price: 4s. 6d. (English).

A constructive contribution to a difficult problem.

"Cardiac Problems for Chest Physicians: An NAPF Symposium"; 1958. London: National Association for the Prevention of Tuberculosis. 8" x 5", pp. 40, with illustrations. Price: 5s.

The report of a meeting held in London on December 6, 1957, under the chairmanship of K. Shirley Smith, B.Sc., M.D., F.R.C.P.

"Psychopharmacology: Pharmacologic Effects on Behavior", edited by Harry H. Pennes, M.D., D.Med.Sci. (Neurology); 1958. New York: Hoeber-Harper Book. 9" x 6", pp. 276, with illustrations. Price: \$8.00.

A symposium on the mental effects of drugs.

"Advances in Electrocardiography", edited by Charles E. Kossman, B.S., M.D., Med.Sc.D., F.A.C.P.; 1958. New York and London: Grune and Stratton. 9" x 5½", pp. 288, with many illustrations. Price: \$9.75.

Lectures from a course held at the New York University-Bellevue Medical Center in 1956.

"Essentials of Gynecology", by E. Stewart Taylor, M.D.; 1958. Philadelphia: Lea and Febiger. 9½" x 5½", pp. 504, with 343 illustrations. Price: \$12.00.

For undergraduate medical students and young practitioners of gynecology.

"Care of the Premature Infant", by Evelyn C. Lundeen, R.N., and Ralph H. Kunstadter, M.D., F.A.C.P., F.A.A.P.; 1958. Philadelphia and Montreal: J. B. Lippincott Company. Sydney: Angus and Robertson, Limited. 8" x 5", pp. 485, with 87 illustrations. Price: 88s.

The methods and techniques used at the Hortense Schoen Joseph Premature Infant Station at Michael Reese Hospital, Chicago.

"Drugs and the Mind", by Robert S. de Ropp; 1958. London: Victor Gollancz, Limited. 7½" x 4½", pp. 320. Price: 25s. (Australia).

A popular type of book.

"Diagnostic Laboratory Hematology", by George E. Cartwright, M.D.; Second Edition; 1958. New York, London: Grune and Stratton. 8½" x 5½", pp. 264, with illustrations. Price: \$6.75.

Written primarily for the use of students and doctors who carry out hematological examinations in their own rooms, this book also includes some more elaborate, but preferable, methods of investigation.

"Skin Grafting", by James Barret Brown, M.D., and Frank McDowell, M.D.; Third Edition; 1958. Philadelphia and Montreal: J. B. Lippincott Company. Sydney: Angus and Robertson, Limited. 10" x 6½", pp. 427, with 328 figures and six colour plates. Price: £8 5s.

A completely revised edition.

"Cardiovascular Diseases", by David Scherf, M.D., F.A.C.P., and Linn J. Boyd, M.D., F.A.C.P.; Third Edition; 1958. New York and London: Grune and Stratton. 9½" x 6½", pp. 846, with many illustrations. Price: \$17.75.

The entire text has been revised and new sections have been added since publication of the previous edition ten years ago.

"Pediatric Surgery", by Orvar Swenson; 1958. New York: Appleton-Century-Crofts, Inc. 10" x 6½", pp. 754, with many illustrations. Price: \$20.00.

The author has aimed to supplement rather than to duplicate volumes on general adult surgery.

"The Work of WHO, 1957: Annual Report of the Director-General to the World Health Assembly and to the United Nations", Official Records of the World Health Organization No. 82; 1958. Geneva: World Health Organization. 11" x 8½", pp. 192. Price: 6s. 9d. (English).

The title is self-explanatory.

"Body and Mind in Western Thought: An Introduction to Some Origins of Modern Psychology", by Joan Wynn Reeves; 1958. Mitcham, Victoria: Penguin Books. 7" x 4½", pp. 416, with illustrations. Price: 7s. 6d.

This book provides an introduction to the history of psychology and a vantage point from which to consider the present.



## The Medical Journal of Australia

SATURDAY, SEPTEMBER 13, 1958.

### AN OPPORTUNITY FOR MEDICAL RESEARCH IN PAPUA AND NEW GUINEA.

RECENTLY in the United Nations Trusteeship Council Australia was accused of neglecting her obligations in the Trust Territory of New Guinea. At the present time these charges are particularly inept. It is true that before the second World War the amount accomplished in the Territory of Papua and New Guinea was limited—although this should not be allowed to reflect on the vision and hard work of many, both at the head of the Administration and in the rank and file, who carried on under considerable difficulties. However, since the second World War a vigorous and constructive policy has been developed, the results of which have scarcely yet had time to be apparent, but may be confidently anticipated. This applies not least to the medical services, which today offer a challenge and an opportunity that should appeal to the younger generation of Australian doctors. In particular, an opening now exists for a man of above average ability to develop a newly created Division of Medical Research within the Territory.

This is the story, with its background. The combined territories of Papua and New Guinea include half the mainland of New Guinea and all the islands to the north and north-east. Their area is 183,600 square miles, and the total population is 1,750,000 persons, of whom 18,000 are of European and other non-indigenous origin. Internal communications by road are limited considerably by the terrain, which is mountainous with fast-flowing rivers. However, air services are well organized and provide rapid communication between most places in the Territory. It is usual, with the opening of a new patrol centre, to establish an aerodrome for small aircraft. The over-all density of population is about ten persons per square mile, but, as there are vacant areas, the population is usually more concentrated. The people live in villages and hamlets, and local road systems are gradually linking these units. The housing is usually of local materials and poor design. The people depend on a subsistence economy, but primary and secondary industry is gradually raising the standard of living. Most areas are under control and have local hospital or aid-post care, but some areas in the Central Ranges are still uncontrolled or partly controlled. The two most important diseases in the Territory are malaria and tuberculosis. In addition, filariasis, helminthiasis, amoebic and bacillary dysentery, leprosy, yaws and venereal diseases occur. To these may be added the general medical problems of anaemia, pneumonia and others aggravated by the tropical environment and the variable standard of nutrition. Cirrhosis of the liver and kwashiorkor occur in certain areas.

The medical service in the Territory is provided by the Department of Public Health, with headquarters at the capital, Port Moresby. This Department carries out over the whole of the Territory all the functions of curative and preventive medicine normally carried out by local and central government health authorities in other countries. It also undertakes private practice, but there are some private practitioners in the main centres of Port Moresby, Lae and Rabaul. The Department is administered by a Director, with Assistant Directors who are responsible for Divisions of Medical Services, Preventive Medicine, Medical Training, Infant, Child and Maternal Health, and Administration. The present activity stems from a European medical staff consisting of 80 medical officers, 146 medical assistants, 138 trained nurses and 172 ancillary and clerical staff. The indigenous staff consists of approximately 4500 Papuans and New Guineans, of whom the majority are semi-skilled orderlies, with a gradually increasing educational level. In addition, the Christian missions have a medical staff of 137, of whom 12 are medical officers.

The curative medical services are administered through 98 hospitals, scattered over the entire Territory and assisted by 1200 aid posts or village dispensaries. The standard of the hospitals varies from place to place, but a building programme is proceeding that will in three years provide modern hospitals at all the major centres. To date such hospitals have been constructed only at Port Moresby, Lae and Rabaul. Port Moresby General Hospital, the base hospital for the entire Territory, has a total of 370 beds. The buildings are of a modern design, including air-conditioned laboratories, theatres and an X-ray section. The standard of nursing is high and is dependent on European nurses as supervisors in all wards. The medical staff consists of a medical superintendent, a surgeon, an anaesthetist, a physician, an ophthalmologist, a paediatrician, two radiologists, a pathologist, a chest physician and four resident medical officers. This hospital is to be the centre for future medical research in the Territory. Clinical research in the wards will be ably supported by the modern diagnostic laboratories. The hospital is also a training centre. Nurses' training has commenced, and a medical school is being built in which, in 1960, the training of assistant medical practitioners will commence along the same lines as in the Central Medical School at Suva, Fiji.

Preventive medicine has till recently dealt primarily with environmental sanitation, but recently there has been a great increase in activity in other fields. In tuberculosis control there are four teams operating continually doing skin tests and X-ray examinations. In malaria control the basic research for an eradication campaign has been completed, and the campaign is about to commence. In leprosy field treatment and control are being developed. The approach to infant, child and maternal health is both curative and preventive. The service operates from 17 government and 120 mission centres and, with field work by road and sea, is endeavouring to reduce the high infant mortality. The aim of the Department of Public Health is the extension of public health to the villages and hamlets of the Territory. In accordance with this there is gradually developing a greater concentration on preventive as opposed to curative medicine. Preventive medicine, to be exact, requires basic research into the problems to be

controlled. With this in view, it has recently been decided to add to the Department a further Division of Medical Research. The current issue of this Journal contains the advertisement for the position of Assistant Director of Medical Research. This officer will be responsible for the initiation and development of research into the Territory's medical problems. At Port Moresby he will have available the excellent library at the headquarters of the Department, be able to use the clinical and other research facilities within the Port Moresby General Hospital, and have close contact with senior officers and other specialists.

Since this Territory was first occupied, considerable basic medical research has been undertaken spasmodically by isolated individuals, but always in addition to normal duties. In particular, since the war, research has been undertaken in goitre, medical and physical anthropology, demography, sterility, haemoglobinometry and malariaology. Extensive studies are also in progress in kuru, an obscure nervous condition that is almost 100% fatal and probably of hereditary origin. This research has, however, only touched the fringe of the problems of disease within the Territory. Infant and child mortality is one of the particular problems of great local concern. This mortality reaches over three hundred per thousand live births in most areas of the Territory. It is thought that two-thirds of the mortality is due to malaria, and the balance to bowel and virus diseases. There has, however, been no research into infant morbidity and resultant mortality. Until this basic information is available, the problem can be tackled only in an uninformed manner. Research must therefore extend into the age of onset, the morbidity and resultant mortality from all diseases due to viruses, bacteria and parasites, and into nutritional disease. Medical anthropology and demography are among the many other broad and relatively untouched fields. The Assistant Director of Medical Research will desire to develop his own particular field of work, and will be assisted in so doing, but he will also be required to guide and assist both personally and through his technical and administrative staff other officers endeavouring to undertake research. From the research that will be undertaken, it is hoped that the Department's aim of a healthy, medically informed community will be brought rapidly closer.

## Current Comment.

### WHAT IS IDENTITY?

IDENTITY is an emerging concept in mental health. It is no easier to define than the related terms—ego, self, personality, person, character, temperament, ego strength and identity strength. However, the World Federation for Mental Health thinks the concept of identity of sufficient importance to devote a special report to it.<sup>1</sup> The Scientific Committee, which is responsible for the report, refrains from attempting a definition of identity; indeed, to have succeeded would have begged the whole discussion. The identity of an individual is a property which is inalienable from him; but, in another sense, an individual's identity is only needed and, it might be argued, only possible when he is a member of a group. The term identity is, therefore, used in a group as well as an individual sense, recog-

nizing the interdependence of group and individual. This emphasis of identity will be found helpful in illuminating many examples of present-day individual and cultural pathology. In the World Federation for Mental Health report these examples range from the "principle of positivism" ("a boy should be brought up positively to be a boy and not to be something that is not a girl") to bodgies and widgeys ("psychologically dispossessed by the family, but not yet assimilated into the adult cultural pattern, with a very strong urge to establish identity with the peer group").

An interesting question is why the Scientific Committee of the World Federation for Mental Health is undertaking work of this kind. One might good-naturedly infer that the Committee is having difficulty in establishing its own identity. It has been usually considered that the main preoccupation of the World Federation for Mental Health should be with social action—with gettings things improved, and with dispensing information toward this end. But the Federation, in accepting this role, is conscious of the slender conceptual foundations of most of its work. This is the main reason given for the present study of identity and for the reports which are to follow. The Committee has aimed, with some success, at promoting the concept as a basic one of mental health. There is a considerable and steadily growing literature on identity. It is one of those ideas which the poet is apt to illuminate as memorably as the scientist, as in John Donne's celebrated observation:

No man is an Island, intire of itselfe; every Man is a peece of the Continent, a part of the maine; if a Clod be washed away by the Sea, Europe is the lesse, as well as if a Mannor of thy friends or of thine owne were; any man's death diminishes me, because I am involved in Mankind; And therefore never send to know for whome the bell tolls; it tolls for thee.

### THE CAUSE OF FEVER.

NEARLY one hundred years ago German pathologists discovered that when the relatively cell-free fluid filtered from pus was injected into animals, it produced, after a latent period, a rise in temperature and pulse rate. Much work has been done on the subject since then, and it is now known that many bacteria produce powerful endotoxins which, when injected, cause fever. These bacterial pyrogens, most of which are polysaccharides or lipopolysaccharides of high molecular weight, are relatively heat-stable. They are well known from the fact that they not infrequently contaminate glassware, needles, rubber tubing and fluids for intravenous injection and give rise to post-injection chills and fever. Besides causing a rise in temperature on injection, they cause a temporary leucopenia followed by leucocytosis.

How do these substances act and what part do they play in the fever following infection? Some light is thrown on these questions by W. B. Wood,<sup>1</sup> who reviews the work done by himself and his co-workers and by other investigators on the causation of fever. He states that in 1948 P. B. Beeson reported on a pyrogen in saline extracts of polymorphonuclear leucocytes. This was found to be heat-labile and to produce, on injection into animals, a brief febrile response with a short latent period. It caused little, if any, leucopenia. A considerable degree of tolerance could be developed to the bacterial pyrogen, but not to the leucocytic pyrogen. When typhoid vaccine was injected into a rabbit, after an interval the blood serum from this rabbit caused fever. The pyrogen here has the properties of leucocytic pyrogen and not bacterial pyrogen. Since bacterial endotoxins are known to have an affinity to leucocytes and to be toxic to them, it is suggested that endotoxin-induced fever is caused by the thermogenic action of endogenous pyrogen released from leucocytes injured by the bacterial endotoxin. When animals are made leucopenic with nitrogen mustard, the formation of circulating pyrogen is greatly reduced. The evidence strongly suggests that the leucocytic pyrogen, rather than

<sup>1</sup> "Identity"; World Federation for Mental Health Introductory Study No. 1; 1958. London: World Federation for Mental Health. 8½" x 5½", pp. 46. Price: 5s. (English).

<sup>1</sup> *New England J. Med.*, 1958, 258: 1023 (May 22).



the bacterial endotoxin itself, acts upon the thermoregulatory system. When the pyrogen is injected directly into the carotid artery, the amount reaching the thermoregulatory centres in the brain will, during the period of injection, be greater than when the substance is injected intravenously. Leucocytic pyrogen injected into the carotid artery causes a more prompt and more pronounced rise in temperature than when injected into a vein. When bacterial endotoxin is injected, it makes no difference in response whether it is injected into the carotid artery or into a vein. After the injection of bacterial endotoxin, circulating leucocytes can be seen to respond by sticking to the vascular endothelium, thus accounting for the post-injection leucopenia. It may therefore be concluded that fever, induced by endotoxin, results from the action of endotoxin on the leucocytes with the production of circulatory endogenous pyrogen, which directly affects the thermoregulatory centre causing fever.

Do fevers following infection arise in this way? A heat-labile pyrogen has been found in the exudate in pneumococcal peritonitis in rabbits. This resembled in all respects leucocytic pyrogen. It was difficult to demonstrate its presence in the blood, but it was finally shown to be present by taking large samples of serum. As pneumococcal peritonitis is always accompanied by bacteraemia, localized cellulitis was induced by a hemolytic streptococcus. A high fever was produced, but there was no bacteraemia. The same type of transferable pyrogen was demonstrated in the blood. The conclusion drawn from all the experimental evidence is that endogenous pyrogen derived from polymorphonuclear leucocytes has a central role in the pathogenesis of a number of fevers. Leucocytes in inflammatory exudates release their pyrogen into the surrounding medium while still functionally active. The chemical identity of leucocytic pyrogen is not yet known.

Oddly enough, Sir George Pickering<sup>1</sup> states, no pyrogen has yet been obtained from human leucocytes. Cranston, Goodale and Wendt, working in Pickering's laboratory, have not yet been able to produce fever with extracts of human leucocytes made by shaking them with glass beads, by freezing and thawing them, or by lysing them with water. This aspect of the subject remains obscure.

#### THE POLICY OF THE NUFFIELD FOUNDATION.

The Nuffield Foundation makes many generous grants for research work covering a wide and varied field. However, it has certain definite points of policy in this matter, and it may save unnecessary applications and disappointment if these are pointed out. They are referred to in the Twelfth Report of the Foundation. The Report points out that of the very large number of proposals submitted to the Foundation only very few can be selected for support. Mention is then made of some things which on grounds of policy the Foundation is not able to help. With the rare exception of a conference in which the Foundation has a special direct interest, on account of work it has otherwise been supporting, grants are not made towards the expenses of congresses and conferences, or of delegates who wish to attend them. Nor are grants made for the publication of books or reports, except occasionally when the book records the results of research work financed by the Foundation. Travel grants to enable persons to take up appointments overseas cannot be made, and the Foundation is unwilling to supplement scholarships or maintenance grants from other sources which are insufficient for their purposes. Since the aim of the Foundation is to support promising work which for some reason is not attracting support from elsewhere, contributions are not made to public appeals.

On the positive side, the Report explains the attitude of the Foundation to applications for the support of what may, rather loosely, be described as research projects. The Foundation subscribes to the view that the pursuit of new knowledge is as much a university function and duty as is

the dissemination of existing knowledge. Therefore it does not feel that it should be called upon to finance the everyday investigational work of a university department; this, in the Foundation's view, is the responsibility of the university. The kind of research inquiry about which the Foundation is likely to become enthusiastic is "the inquiry which seems to be not only promising and well planned, but also one whose originator is imbued with so keen and urgent a desire to carry it out that he is ready to struggle along on a shoe-string if misguided grant-giving bodies fail to appreciate his work".

The Report goes on to point out that the Foundation would not now be so explicit on where its interests lie had it not received an increasing number of requests for funds to assist inquiries which, as far as it can judge, are pedestrian—that is to say, requests indicative of a feeling that a department must nowadays be able to say that it has some research in progress. As one instance from the many that might be quoted of the kinds of persons and projects which the Foundation seeks to help, the Report cites the group at the Post-Graduate Medical School at Hammersmith Hospital, who for several years have been working, as have many other groups, on the development of aids to cardiac surgery. In the early years they received little support and much cold douching from expert quarters. But they persevered and produced the Melrose heart-lung machine. What is even more important, however, the Report continues, is that in the course of the work Dr. D. G. Melrose discovered and applied to man a safe method of stopping and restarting the heart, and so made possible an advance in cardiac surgery.

Apart from the fact that the Nuffield Foundation has every right to do what it wishes with its own money, its original and thoughtful policy must have general support. One may confidently expect that from time to time it will be the means of stimulating work of major significance which might otherwise have failed completely.

#### THE COLLECTED PAPERS OF HUGH TRUMBLE.

MEDICAL PAPERS, particularly those of a more technical character, quickly become outdated. Few of them can with advantage be reprinted years after their original appearance, and the collection into one volume of the published papers of a single medical writer is rarely contemplated. It is thus a tribute to the man himself that a recently published volume of the collected papers of Mr. Hugh Trumble, of Melbourne,<sup>1</sup> must be regarded as one of these rare exceptions. An examination of the papers reveals two points which help to explain this fact. The first is that the papers are readable and have a warm, personal character; the reader becomes aware of the author as a person and of his original and reflective mind. The second is the breadth of the field of which Trumble has made himself master: orthopaedic surgery, including the making of appliances, thoracic surgery, neurosurgery and the general surgery which is the basis of his specialized knowledge and skill. The twenty-six papers in the volume are not the author's complete output; an appended list gives eight others not included.

It was not Mr. Trumble's idea to publish these papers. At the original suggestion of Mr. Robert Lawson, the honorary medical staff of the Alfred Hospital, Melbourne, recommended the project to the Board of Management of that hospital. With the Board's financial aid the volume was prepared. As an act of homage to a distinguished Australian surgeon, the volume is graceful and effective. It is, however, much more than this. No surgeon or other member of our profession could read it without deepening his understanding of what lies behind medicine and its practice. It is good, although to some it may be a little surprising, that this should come from a surgeon.

<sup>1</sup> "The Collected Papers of Hugh Trumble", edited by Leonard Cox, M.D., R. S. Lawson, F.R.C.S., and T. E. Lowe, M.D., with a foreword by W. G. D. Upjohn, O.B.E., M.D., M.S., F.R.C.S., F.R.A.C.S.; 1957. Melbourne: Alfred Hospital in association with Melbourne University Press. 8½" x 5½", pp. 328, with many illustrations. Price: 84s.

<sup>1</sup> *Lancet*, 1958, 1: 59 (January 11).



## Abstracts from Medical Literature.

### MEDICINE.

#### Cerebral Haemorrhage in Hypoglycaemia.

H. FALGREN, B. ANDERSON AND C. LUNDMARK (*Acta med. scandinav.*, August 13, 1957) review the cerebral changes produced by recurrent or prolonged hypoglycaemia and record a case of a diabetic male taking insulin, who developed hypoglycaemia, failed to respond to glucose, and was found to have large bilaterally symmetrical intracerebral haemorrhages without evidence of arterial disease.

#### Neurohypophyseal Function.

J. C. SLOPER (*Proc. Roy. Soc. Med.*, May, 1958) reports two recently developed techniques for use in the study of neurohypophyseal function. The first involves the study of enzyme systems found in the cytoplasm of the supraoptic and paraventricular nuclei. These enzymes include acid phosphatase and certain esterases. The function of the enzymes is unknown but they are greatly affected by osmotic stress. The second technique depends upon the capacity of neurosecretory cells to concentrate the isotope sulphur 35, which is conveniently administered in the form of labelled cysteine. Sulphur 35 accumulates first in the supraoptic and paraventricular nuclei and later in the infundibular process. These techniques are at present in the experimental stage, but it is hoped that they will play an important role in elucidating the function of the neurohypophysis.

#### Androgen Therapy in Pregnancy.

G. NELLEHAUS (*New England J. Med.*, May, 1958) describes the sixth reported example of female pseudohermaphroditism after androgen therapy in the mother during pregnancy. A combination of ethinyl oestradiol and methyltestosterone was taken by mouth during the 100 days after the first missed period, in the hope of preventing a miscarriage. At birth, the sex of the child could not be determined, but subsequent investigation revealed female genetic sex with hypertrophy of the clitoris, persistent urogenital sinus and fusion of the labia majora. The author warns against the use of androgens during pregnancy and discusses the possibility that under certain circumstances progesterone may have the same effect.

#### Bronchoscopy in Haemoptysis.

F. O. SEGARRA (*New England J. Med.*, January 23, 1958) reports his experience at the Bronchoscopy Dispensary, Hospital Cochin, Paris, of bronchoscopy in patients who presented with haemoptysis and in whom there was also radiological evidence of a pulmonary abnormality. An adequate lesion was found in 73% of 498 patients. Bronchogenic carcinoma accounted for 39% of these lesions and localized bronchitis for 25%; however, only 12% of 1027 patients with bronchitis who had

radiological abnormalities suffered haemoptysis. Benign tumours and bronchiectasis accounted for 4% and 5% of these lesions respectively. A definite pulmonary diagnosis was later made in 17% of the 177 patients in whom bronchoscopy did not reveal a cause of bleeding.

#### Macrocytosis from Anticonvulsant Drugs.

C. F. HAWKINS AND M. J. MEYNELL (*Quart. J. Med.*, January, 1958) discuss the occasional occurrence of macrocytosis among patients receiving either phenytoin or phenobarbitone, which they suggest is due to a disturbance in nucleoprotein metabolism. The macrocytosis does not seem to be of practical significance, but megaloblastic anaemia, when it occurs, is frequently serious. Correction of such anaemia with cyanocobalamin or folic acid produces a striking reduction in the incidence of fits in epileptic subjects.

#### Amyl Nitrite for Differentiating Heart Murmurs.

J. BARLOW AND J. SHILLINGFORD (*Brit. Heart J.*, April, 1958) state that the clinical differentiation of apical systolic murmurs arising at the mitral and aortic valves may be difficult, especially when the murmur of aortic origin is audible only at the apex or is loudest there. They present phonocardiograms showing that the inhalation of amyl nitrite has a different effect on the two murmurs, decreasing the intensity of the murmur of mitral regurgitation and increasing that of aortic stenosis.

#### Coronary Venous Thrombosis.

B. LAKE (*Am. Heart J.*, January, 1958) reports a case of coronary venous thrombosis in a man aged 38 years. The mode of onset and the symptoms simulated those of infarction of the heart. No other abnormality was found at autopsy. Histological examination revealed ante-mortem thrombosis in a distended coronary vein and considerable haemorrhage into the spaces between the muscle fibres. The coronary arteries showed no histological abnormality. Search of the literature for a similar case was unsuccessful.

#### Asymptomatic Submaxillary Gland Enlargement.

G. KELEMEN AND W. W. MONTGOMERY (*New England J. Med.*, January 23, 1958) report a high prevalence in men and women over the age of 50 years of chronic symmetrical asymptomatic submaxillary salivary gland enlargement. More women than men appeared to be affected; no underlying pathological process was detected, although no histological study was undertaken. No correlation could be made between palpably enlarged glands and the status of body nutrition or obesity. The phenomenon appeared to accompany advancing age.

#### Internal Mammary Artery Ligation for Angina Pectoris.

R. ADAMS (*New England J. Med.*, January 16, 1958) reports experience with four patients with intractable angina pectoris due to coronary artery disease who were treated by ligation of the

internal mammary artery, with the object of increasing the circulation through the pericardiophrenic vessels. Three patients received benefit, which the author ascribes to the placebo value of surgery, as no improvement could be shown on objective clinical tests.

#### Intravenous Bone Marrow.

E. D. THOMAS *et alii* (*New England J. Med.*, September 12, 1957) report the results on six patients of intravenous injections of one to three thousand million marrow cells from donors or cadavers, either fresh or stored in glycerol at  $-80^{\circ}\text{C}$ . for three weeks. No untoward effects were noted. The use of marrow homographs may be indicated after bone marrow aplasia induced by irradiation. Homographs will not take unless adequate irradiation has depressed the immune response of the recipient. This form of treatment is to be differentiated from the use of stored isologous marrow in toxic bone marrow depression not produced by irradiation.

#### Pregnancy and Pernicious Anaemia.

J. F. ADAMS (*Scottish Med. J.*, January, 1958) describes haematological and vitamin B<sub>12</sub> estimations in six patients with pernicious anaemia during and after pregnancy. Fetal requirements continued to deplete the maternal stores of vitamin B<sub>12</sub> when the maternal serum vitamin B<sub>12</sub> levels were below normal. Oral vitamin B<sub>12</sub> did not protect the mother from a falling serum vitamin B<sub>12</sub> level. The serum vitamin B<sub>12</sub> level in the children rose spontaneously after birth without vitamin B<sub>12</sub> supplement.

#### Dizziness.

G. D. HOOPLE (*J.A.M.A.*, December 14, 1957) discusses the differential diagnosis of dizziness. He describes dizziness as a sense of motion either of the patient or of his surroundings, when actually there is no motion of either. Dizziness is most often due to a disorder of the labyrinth, but may be caused by a lesion affecting the eyes or the proprioceptive system. The ear is the true organ of balance, and though lesions affecting the eyes or the muscle joint system may cause mild dizziness, these do not produce severe symptoms such as may result from dysfunction of the labyrinth. Full examination is necessary to arrive at a diagnosis. A large proportion of labyrinthine disturbances are not serious. Relief is sometimes obtained by giving sedatives, vasodilators, antinauseants or by prescribing a salt-free diet plus ammonium chloride to combat oedema. Severe hydrops of the labyrinth may destroy hearing in one ear and leave a residue of dizziness and distorted hearing. In such a case surgical destruction of the affected ear may give great relief.

#### Delirium Tremens.

F. A. FIGURELLI (*J.A.M.A.*, February 16, 1958) describes his treatment of delirium tremens. In 173 out of 180 patients treated, the onset occurred while the patient was actively drinking; in seven it occurred one to 48 hours after admission to hospital. In uncomplicated cases treatment consisted of immediate

withdrawal of alcohol and administration of promazine hydrochloride. An initial dose of 200 or 300 milligrammes was given intramuscularly, followed by a second injection of 100 milligrammes within four hours or less, and oral administration of 100 milligrammes four times daily thereafter. Figurelli states that promazine possesses properties similar to chlorpromazine but exhibits less toxicity. In the last 87 patients treated there have been no deaths. Patients treated with 200 milligrammes of promazine intramuscularly were controlled, and fell into a sound but not stuporous sleep for at least four hours. Rarely, patients require larger doses, up to three injections of 200 milligrammes per day for one or two days. They usually recovered from delirium tremens within 24 to 48 hours, but some were delirious for up to three and a half days; one with Korsakoff's syndrome was delirious for nine days. Four patients who relapsed in two to four days had developed the condition after operation or injuries or in association with severe organic disease. Figurelli states that under conventional treatment delirium tremens lasts seven days. Since the use of promazine, the death rate has fallen very markedly; previously it averaged 10%, but since the introduction of promazine the death rate has fallen to 4.5%.

#### Steroids in Allergic Disease.

R. BOOKMAN (*J.A.M.A.*, December 14, 1957) summarizes his opinion of the uses of ACTH and steroid hormones in allergic diseases. He states that after eight years of experience with these preparations he has come to the conclusion that the steroids do not cure allergic disorders. They may relieve them temporarily, and at times they must be used in severe cases. He states that we know so little of the effects of the adrenal steroids and the toxic effects can be so serious that reliance should be placed more on endeavours to discover the cause of allergic manifestations and treatment by the older forms of symptomatic therapy, which are often successful and rarely dangerous. He lays stress on the danger of steroids concealing infection which may have a fatal issue, and mentions a recent study in which the steroids were shown to reduce greatly the protection given by tetanus antitoxin due to enhancement by steroids of the potency of the toxin.

#### Origin of Heart Sounds.

A. A. LUISADA *et alii* (*Am. Heart J.*, March, 1958) state that even at the present day there is no agreement about the meaning of the typical vibrations which may be recognized within the groups of noises that form the heart sounds. They have studied the sounds in the dog and in man, using a new system of phonocardiography including selective sound filters, the records being made simultaneously with low-frequency tracings of the precordial, aortic, carotid and jugular pulses. They conclude that the first sound is made up of three phases: a low-pitched beginning due to myocardial tension, a higher-pitched central phase due to valvular events, and a low-pitched final phase due to vascular phenomena.

The central phase contains at least four vibrations corresponding to the motion of the four valves in the following order: mitral closure, tricuspid closure, pulmonary opening and aortic opening. The second sound is made up of three phases also, a low-pitched beginning due to eddies preceding valve closure, a higher-pitched central phase due to closure of the semilunar valves, and a low-pitched final phase due to final vibrations plus the opening of the atrio-ventricular valves. The authors state that rapid filling of the ventricles is usually non-simultaneous, the right ventricle filling before the left.

#### Iron Deficiency and the Stomach.

F. LEES AND F. D. ROSENTHAL (*Quart. J. Med.*, January, 1958) studied the gastric mucosa by the Melbourne method of aspiration biopsy in patients suffering from iron-deficiency anaemia. They found that the atrophy and infiltration of the mucosa did not improve when the anaemia was corrected with iron, but on the contrary sometimes showed a gradual increase. Achlorhydria always persisted despite treatment, and sometimes achlorhydria was found after treatment when it had not been present before. Epithelial lesions associated with iron deficiency did improve. The authors conclude that the gastric mucosal lesions are not due to iron deficiency, but precede and predispose to iron deficiency in some way not understood.

#### Prognosis in Untreated Hypertension.

F. O. SIMPSON AND A. R. GILCHRIST (*Scottish Med. J.*, January, 1958) describe a five-year follow-up on 299 patients suffering from hypertension with symptoms, but without other evidence of heart disease or diabetes, who had been admitted to hospital for assessment and who subsequently had not had specific antihypertensive therapy. Cases of renal hypertension were not excluded. The majority of patients were evenly distributed between the ages of 40 and 60 years. One hundred and seventy-six patients died within five years, of whom only eight died from causes unrelated to the cardio-vascular system. If the material was graded according to retinal changes on the first examination, the five-year survival was 75% among those with little or no retinopathy, 15% among those with hemorrhages and exudate and nil among those with papilloedema. Women fared better than men. Renal failure accounted for 46% of deaths of those in whom hemorrhages, exudate or papilloedema were seen initially, as opposed to 17% when these findings were not present initially. In women with benign hypertension, obesity was associated with a good prognosis. Of 171 patients with benign hypertension on whom electrocardiographic evidence was available, the survival rate for men with T-wave abnormalities was 40% against 59% of those without T-wave abnormalities; in women the corresponding figures were 59% and 88% respectively. Twenty-three out of 174 patients with benign hypertension had albuminuria when first seen, six being men, none of whom survived for five years; in contrast,

56% of the men of similar retinal grade but without albuminuria survived; of the women patients, 35% of those with albuminuria survived for five years, whereas 79% of those without albuminuria survived five years. For men, if the average resting diastolic blood pressure was between 100 and 119 millimetres of mercury the five-year survival rate was 33%, and if the pressure was between 120 and 139 millimetres of mercury the five-year survival rate was 15%. For women the corresponding figures were 66% and 50% respectively.

#### Asian Influenza.

The Commission on Influenza of the United States Armed Forces has published a report (*J.A.M.A.*, December 21, 1957) on the effectiveness of vaccine against Asian influenza. A comparison is made between 12,000 subjects who received monovalent or polyvalent vaccines and 9000 who received placebo injections. Based on relative respiratory illness rates, the effectiveness of Asian influenza vaccine is estimated at between 42% and 67% in various groups of subjects. Doses of 200 C.C.A. units of vaccine subcutaneously were not sufficient to give effective protection against influenza, though many subjects did not contract the disease. With a polyvalent vaccine containing 200 C.C.A. units of Sevine PR8, PR301 and Great Lakes strains in addition to 200 C.C.A. units of Asian virus, a second dose of 200 C.C.A. units given six weeks after the first gave additional protection. It was recommended that Asian virus vaccine of 400 C.C.A. units be used for primary immunization.

#### THERAPEUTICS.

##### Effect of Potassium on Digitalis Toxicity.

E. FLETCHER AND C. F. BRENNAN (*Brit. Heart J.*, April, 1958) examine the relationship between potassium metabolism and digitalis toxicity, especially with regard to the action of the drug on isolated groups of cardiac cells producing ectopic foci of contraction. Depletion of the potassium in the heart muscle sensitizes the heart to digitalis, so narrowing the margin between therapeutic and toxic action. Potassium loss may turn a therapeutic dose into a toxic dose. During the development of congestive heart failure the amount of potassium in the body is reduced, and negative potassium balance is favoured by such concomitant factors as poor appetite, unappetizing food, impaired absorption, deranged liver function, rigid salt restriction and the administration of ammonium chloride, acetazolamide and ion-exchange resins. These factors may play an important part in the evolution of intractable heart failure, as they may adversely modify the response of the heart to digitalis. Progressive loss of myocardial potassium with advancing coronary disease may help to explain changing sensitivity of the heart to digitalis. In these circumstances potassium administration can abolish toxic arrhythmias caused by digitalis.



## British Medical Association.

### NEW SOUTH WALES BRANCH.

#### INTERIM REPORT ON MEDICAL EDUCATION: PART I. STUDENT NUMBERS AND THE PROBLEM OF THE ESTABLISHMENT OF A SECOND MEDICAL SCHOOL.

##### 1. Appointment and Constitution of a Committee on Medical Education.

At an extraordinary general meeting of the New South Wales Branch of the British Medical Association on February 12, 1958, it was decided to appoint a Committee on Medical Education, its composition being as follows (the Committee having the power to coopt): (i) one member nominated by the active teaching staff of each of the four teaching hospitals of Sydney; (ii) three representatives nominated by the Council of the New South Wales Branch of the British Medical Association; (iii) a representative nominated by the active teaching staff of the three special teaching hospitals; (iv) a representative nominated by each of the following Colleges: The Royal Australasian College of Physicians, the Royal Australasian College of Surgeons, the Royal College of Obstetricians and Gynaecologists, and the College of General Practitioners; (v) a representative of the Senate and four representatives of the Faculty of Medicine, nominated by the Senate of the University of Sydney; (vi) a representative of the New South Wales University of Technology; (vii) a representative of The Post-Graduate Committee in Medicine in the University of Sydney.

The Committee, as subsequently constituted, was as follows: Dr. A. W. Morrow (chairman), Dr. G. L. Howe, Dr. T. Y. Nelson, representatives of the New South Wales Branch of the British Medical Association; Dr. J. K. Maddox, Royal Prince Alfred Hospital (during absence overseas, Dr. E. L. Susman acted); Dr. G. V. Hall, St. Vincent's Hospital; Professor W. K. Inglis, Sydney Hospital; Dr. V. H. Cumberland, The Royal North Shore Hospital of Sydney; Dr. S. E. L. Stening, Royal Alexandra Hospital for Children; Dr. Ida B. Saunders, Royal Hospital for Women, Paddington; Dr. J. N. Chesterman, Women's Hospital, Crown Street; Dr. I. D. Miller, Royal Australasian College of Surgeons; Dr. H. M. Saxby, College of General Practitioners; Dr. V. M. Coppleson, coopted; Professor C. G. Lambie, coopted.

##### 2. Terms of Reference of Committee on Medical Education.

The terms of reference were as follows:

To discuss medical education with special reference to the Murray Report, the Committee to make its report urgently to the Council of the New South Wales Branch of the British Medical Association, the Council of the Association to take such action as it deems necessary.

##### 3. Procedure.

Because of the present overcrowding in the University of Sydney, due to the unrestricted entry of students thereby creating a situation unparalleled in the British Commonwealth, it was decided to consider first the question of the establishment of a new medical school and to submit an interim report thereon. It was realized that it was essential that authoritative information and opinions on the organization of medical schools should be sought of persons and bodies both in and outside Australia. To this end, Professor C. G. Lambie, Emeritus Professor of Medicine, University of Sydney, who was coopted to the Committee, was appointed coordinator.

##### 4. Interim Report of Council on Medical Education.

After careful and exhaustive examination of the Committee's Report and of the whole subject during the past six months, the Council of the New South Wales Branch of the British Medical Association is of the opinion that, as a result of the inability of the University of Sydney to limit its numbers, the Faculty of Medicine has become seriously overcrowded, until it is now the largest single medical school in any English-speaking community. Relief and restriction of numbers in the Faculty of Medicine in the University of Sydney have become urgent. It is the firm opinion of the Council that the methods to be adopted for the relief of this position should be the subject of a special inquiry. The indefinite statements in the Murray Report do not provide in themselves sufficient reasons on which to base action which will determine the future of medical education in this

State for many years to come and which will involve the expenditure of large amounts of money.

The Council believes that the views of all interested persons and bodies should be obtained at such a special inquiry.

##### 5. Recommendations of Council.

The following are the recommendations and comments of Council:

(a) Recommendation: In order that a sufficient number of adequately trained doctors for the needs of the community may graduate each year, the establishment of a second medical school is necessary.

The situation in the Faculty of Medicine, University of Sydney, is unparalleled in the British Commonwealth. Most departments are seriously overcrowded, accommodation is inadequate and staff is insufficient to handle the large number of students. Having regard to the predicted increase in enrolments over the next eight years, the situation must deteriorate rapidly, unless measures are taken to remedy it. Similarly, in the teaching hospitals facilities are inadequate in relation to the number of students allotted to each of them.

(b) Recommendation: The second medical school should be an integral part of a University College initially affiliated or federated with the University of Sydney and should be connected with a University Hospital on the same campus.

There are in parts of the world medical schools which are not associated with universities. In this connexion, the Goodenough Report of the Interdepartmental Committee on Medical Schools, 1944, states:

... only medical schools that are integral parts of universities should undertake the training of undergraduate medical students. To agree to the training of medical students in institutions which are not parts of universities is to support the belief that doctors can be produced in intellectual circumstances that are not the best that the community provides. We cannot accept such a belief. Medicine is a branch of human thought and activity that demands and provides opportunities for the fullest development of humanistic and scientific talents. It is a branch of higher learning, and the most favourable training ground for those who follow it is in the recognized centres of higher learning—the universities. We are certain that it is as full participants in the life of universities, having close associations with those following other branches of learning, that teachers of medical students will receive the strongest stimulus to give of their best, and medical students will be encouraged to develop those qualities of mind and character that make a good doctor.

This view is strongly supported by Lord Cohen, Professor of Medicine at the University of Liverpool and formerly chairman of the British Medical Association Committee, which published the 1948 report on "The Training of a Doctor", and Sir George Pickering, former head of the Medical Unit of St. Mary's Hospital, and now Regius Professor of Medicine at Oxford.

Among the advantages of having a College affiliated or federated with the University of Sydney are the use of common library facilities, loan of apparatus, consultations with specialists, etc.

The Governing Body of the College would have representation on the Senate of the University.

The conception of a University of Technology is to be commended. In this expanding industrial age, there is unlimited scope for development in the field of technology alone, and there is not the slightest doubt that the University of Technology may become outstanding in this regard, as has the Massachusetts Institute of Technology. But it is the firm view of the Council that it would not be in the best interests of the State that a new medical school should be attached to it, nor would it be in the interests of the University of Technology.

If the New South Wales University of Technology develops as anticipated into a large university, it will possess all the disadvantages of a large university such as the Sydney University, but on a greater scale. It will need all its finances to develop it as a University of Technology.

It has been submitted that, with the University of Technology already established, it would be an economy to use it. It is to be pointed out, however, that the cost of building for the Faculties of Arts and Medicine, together with increased accommodation which would be required for the Faculty of Science and the provision of a teaching hos-



pital of adequate dimensions, would be little different if the Medical School were established at the University of Technology or elsewhere.

(c) Recommendation: Having regard to population trends and accessibility, the sites considered most suitable for the establishment of the University College, including the Medical School, are: (A) the area of Parramatta, (B) the area in the Lane Cove Valley.

In general, it may be postulated that a new University College Medical School and University Hospital should be situated in such a position as to serve an area where the resident population, and especially the student population, is increasing, where transport facilities are good, and where it would be easily accessible to students, teachers, doctors and patients. The information contained in the Chief County Planner's Report (1955-1956, page 79) of the County of Cumberland indicates the trends in population movements.

(d) Recommendation: More accommodation and staff should be provided in the Faculty of Medicine at Sydney University, and in the allocation of Government grants this requirement should have priority in relation to other projects. However, if the number of students admitted to the Faculty were limited, the needed increase in accommodation would not be as great as that which had been originally planned.

In dealing with the matter of the establishment of new schools, the Goodenough Report (page 24) stated:

Should an increase in the number of medical schools be necessary, it would be better policy to develop the existing schools to their full capacity before embarking upon the establishment of new institutions.

(e) Recommendation: In view of the facts before the Council, it is reluctantly driven to the conclusion that a substantial limitation of the intake of students to the present Faculty of Medicine, University of Sydney, is called for if proper standards of medical education are to be maintained.

This recommendation is intended not to limit the opportunity to undertake a medical course on the part of those fitted to do so, but rather to ensure the maintenance of a high standard of training and a consequent diminution in the high wastage rate.

(f) Recommendation: The number of students in any medical school in any one year from the first pre-clinical year onwards ought not to exceed 200. If and when the State can afford more medical schools, this number ought to be reduced progressively to a figure nearer the maximum (150) permitted in other schools in the British Commonwealth, and eventually to the optimum (60-100).

This recommendation is in conformity with the experience of universities throughout the world.

(g) Recommendation: In the event of further medical schools being established, the adoption of different standards of medical education must be avoided, and in determining the curriculum in any Faculty of Medicine, the requirements of the General Medical Council (United Kingdom) must be maintained.

#### Full Report.

Part I of the Full Report dealing with the establishment of a second Medical School, in which appear the facts and figures on which the above recommendations are based, will be published at a later date.

## Out of the Past.

*In this column will be published from time to time extracts, taken from medical journals, newspapers, official and historical records, diaries and so on, dealing with events connected with the early medical history of Australia.*

### THE MEDICAL SOCIETY OF VICTORIA.<sup>1</sup>

[From the *Australasian Medical Gazette*, February, 1882.]

A DEPUTATION from the Medical Society of Victoria, introduced by Mr. C. R. Blackett, M.L.A., waited upon the Minister for Lands on Thursday, January 12, with a view of obtaining a Crown grant of the land on which the Society's

Hall now stands. It was urged that if a clear title were given the Society would be in a position to allow the use of the building to other kindred Societies, and would also be enabled to improve the property. The Minister, Mr. Madden, said that if no legal obstacle existed the Crown grant would be issued, with the special provision that the land would be dedicated to the Society for medical and other scientific purposes.

## Correspondence.

### SOLAR LIPSTICK: A PROTECTIVE DEVICE.

SIR: There have been several inquiries from members of the profession following our publication on the use of solar lipstick in *THE MEDICAL JOURNAL OF AUSTRALIA*, August 16, 1958. We were indebted to the firm of D.H.A. for supplying the material with which this survey was carried out, but any suitable "soft" lipstick containing 5% salol would be adequate.

Yours, etc.,

KEITH S. MOWATT, A./Director.

The Queensland Radium Institute,  
Brisbane,  
August 25, 1958.

### FLUID AND ELECTROLYTES IN GENERAL SURGICAL PRACTICE.

SIR: Mr. Lane is to be congratulated on his choice of subject and the manner in which he has condensed that subject into a readable, factual, practical and interesting article ("Fluids and Electrolytes in General Surgical Practice", *M. J. AUSTRALIA*, August 9, 1958). To the "instructed" and those interested in the subject, the article is too short; but it can be read to advantage by the "un-instructed", who should appreciate that (i) the post-operative treatment suggested applies to those cases where the administration of fluid and electrolytes is indicated, and (ii) many properly prepared "cold" surgical cases, e.g., partial gastrectomy, may never require intravenous therapy from the time the "anaesthetist's" drip, if used, has been removed.

Yours, etc.,

R. P. YAXLEY.

85 Wickham Terrace,  
Brisbane,  
August 12, 1958.

### ULCERATIVE COLITIS.

SIR: In his New Zealand lecture on "Ulcerative Colitis", E. R. Hughes<sup>1</sup> makes the statement: "Psychotherapy appeared to be a useless method of treatment. It may not even be harmless as it may produce an introspective personality"; and he takes pains to underline this elsewhere in his paper. This is clearly an unsubstantiated statement. The first sentence is indefinite and unscientific; it does not even say what type of psychotherapy was tried before it was found useless. The second is purely speculative.

Even nowadays one does not expect every surgeon to be a psychotherapist, but one does expect him to know what the word means or else to confess his ignorance. As A. Lewis<sup>2</sup> points out: "There is no form of treatment which has not a psychological aspect and result. The term psychological treatment or its synonym 'psychotherapy' is, however, conventionally limited to those forms which depend upon direct and personal relationship between the patient and the physician." It is a generic term. It is not a specific and precise "remedy". And it is certainly not a sort of black magic practised only in dark rooms, thickly carpeted, furnished with multiple couches.

That this author is neither clear about his terms nor reliable in his deductions is amply shown in the following statements alone: "Few patients in this group require any treatment other than reassurance that malignancy is not present. This does not represent psychotherapy but common sense." "Honest encouragement is better than psycho-

<sup>1</sup> *M. J. AUSTRALIA*, 1958, 2: 181.

<sup>2</sup> "Price's Textbook of the Practice of Medicine", 1956: 1619.

<sup>1</sup> From the original in the Mitchell Library, Sydney.

therapy of any form in this disease." There is no reason by definition or theory why reassurance, common sense, honest encouragement and psychotherapy should be mutually exclusive. In clinical practice they certainly are not. What does Mr. Hughes encourage his patients to do? When he says "psychotherapy of any form", one is tempted to ask what forms he has tried. For example, one might ask Mr. Hughes about his mild case number 4. He says that of his patients of over ten years' duration seven had carcinoma. Did he "honestly encourage" this woman to believe that a cancer was absent, or did he tell her that, as she had had the disease more than ten years, she was a candidate for carcinomatous change?

As a matter of fact, in cases where simple psychotherapy has been fairly tried and scientifically reported, it has had quite a measure of success. One could not be fairer than refer the reader to J. W. Paulley,<sup>1</sup> for Paulley is not a psychiatrist. But from his good case histories he deduces, very straightforwardly and very acceptably, a possible aetiology in terms of suppressed anger and resentment. This was of a characteristic kind and appeared in characteristic circumstances in his series of 48 patients with the disease. There was no mystery, and certainly no magic, about his psychotherapy, though there was skill, patience and resourcefulness.

In each case Paulley took a history of the events in the patient's life leading up to and surrounding the onset of symptoms. He encouraged them to confess and express openly any resentment or grievance they were bottling up. Where it seemed likely to help, there was more detailed discussion and suggestion, often involving the relatives. Where possible, any contributing environmental stresses were relieved. In hospital, doctor and nurses conspired to build up the patient's self-esteem by sympathetic interest, sometimes bolstered by small personal services. His treatment produced complete remission in over 90% of cases in their presenting attack. Surgery became necessary in one. This man subsequently died; and there were two other later deaths, one of an aged woman.

Hughes thought, too, that ACTH and cortisone were not "justified until their efficacy or otherwise had been determined by scientific investigation". Much has now been written and spoken of which he may not be aware; but for brevity we shall quote only the careful and authoritative work of S. C. Truelove and L. J. Witts<sup>2</sup> based on five hospital regions. Both for first attacks and for relapses cortisone increased the chance of speedy clinical remission. In first attacks the beneficial effect was particularly marked, an important finding, as these cases are commonly severe. Indeed, at every stage of severity of the illness the patients treated with cortisone had a more favourable outlook than the controls. Truelove's further comments that while most would agree that cortisone should not be indefinitely continued in the absence of a good response in the patient, he would point out that colour changes of the kind quoted by Brooke,<sup>3</sup> with actual disintegration in places, have been well described in the absence of cortisone therapy.

At least two lines of thought emerge from this study: first, that a psychological exploration of Hughes's patients might throw light on the "spontaneous remissions and exacerbations" which he noticed and noted but could not explain; second, that while it is right to warn of the risk of delaying surgery in acute severe cases, it is equally necessary to warn against premature recourse to surgery. Ileostomies may be much neater than they were, and ileostomy societies very good things, but it is no light matter to lose one's colon. A member of such a club, particularly if young, still has a major social handicap. Except where there is imminent danger of death, there would seem to be a strong case for trying first all other approaches; and a little psychotherapy (or honest encouragement) may be a very good thing. It is certainly the least traumatic way to start. One gains the impression from this article, and from the utterances of other surgeons, not that psychotherapy has been tried and found wanting, but that it has not been fairly tried at all.

There is not much proven about ulcerative colitis, and in particular whether drugs are better than psychotherapy, or surgery better than both. One thing that has been shown, however, is that suppressed anger can have a lot to do with it, and that attending to this can help. We hope, sir, that you will accept this temperate letter as no reflection of our feelings. We have had to suppress our anger (professional

dignity and all that), but since reading Mr. Hughes's paper we have, of course, been passing blood and mucus.

Yours, etc.,

York Street,  
Launceston,  
August 16, 1958.

P. MACDONALD TOW,  
BRYAN HARTLEY.

## Royal Australasian College of Surgeons.

### ADMISSION OF NEW FELLOWS.

At a meeting of the Council of the Royal Australasian College of Surgeons held on June 21, 1958, the following were admitted by election to fellowship of the College: Herbert Giblein Furnell, Geoffrey Charles Huxtable Hogg, Wallace Wilson Jolly, Gordon King, Cecil Wilfred Dickens Lewis, Ghim Seng Yeoh.

The following, having satisfied the Court of Examiners, were admitted to fellowship of the Royal Australasian College of Surgeons by the Council on August 19, 1958: Franklyn Gilbert Bell, Peter Ingram Cromack, Alan Morton Cuthbertson, Hugh Cecil Fletcher-Jones, John Simon Lekias, Solomon Levitt, George Marshall Nunn, William James Pannell, Robert Paton, John Stanislaus Roarty, William Vivian Rowe, John Milton Saunders, George Robert Wardrop.

### FACULTY OF ANÆSTHETISTS.

#### Admission of New Fellows.

The following, having satisfied the Court of Examiners, were admitted to fellowship of the Faculty of Anæsthetists, Royal Australasian College of Surgeons, by the Council on June 21, 1958: Peter Kaye Bryan, John Fenwick, Margaret Matilda Patterson, Charles Richard Procter.

## Post-Graduate Work.

### THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

#### Week-End Course in Rheumatic Diseases.

The Post-Graduate Committee in Medicine in the University of Sydney announces that the following week-end course in rheumatic diseases will be held in the Scot Skirving Lecture Theatre, Royal Prince Alfred Hospital, on Saturday and Sunday, October 11 and 12, 1958, under the supervision of Dr. Ralph Reader. The fee for attendance at this course is £3 3s.

Saturday, October 11: Chairman, Dr. T. M. Greenaway. Rheumatoid Arthritis—Modern Concepts: 10.15 a.m., "The Clinical Picture and Diagnosis", Dr. Selwyn Nelson; 10.45 a.m., "Some Conditions Commonly Confused", Dr. Ralph Reader; 11.15 a.m., "Management", Dr. R. Robinson; 11.45 a.m., "Rehabilitation of the Chronic Arthritic", Dr. Naomi Wing; 12.15 p.m. to 12.45 p.m., question time; 1.45 p.m., "Drug Reactions", M. L. Rosenheim (recorded lecture, "Reactions to Drugs"); 2.15 p.m., "Antibiotics, Butazolidin and Gold", Dr. Peter Harvey; 2.45 p.m., "Aspirin: Corticosteroids", Dr. F. Harding Burns. Gout—Modern Views of Aetiology and Biochemistry: 3.30 p.m., "Clinical Picture and Diagnosis", Dr. Brian Haynes; 4 p.m., "Management", Dr. P. J. Benjamin; 4.30 p.m., question time.

Sunday, October 12: Chairman, Dr. T. M. Greenaway. 9 a.m., "Ankylosing Spondylitis", Dr. John Sands; 9.30 a.m., "Cervical Spondylosis and Intervertebral Disk Disease", Dr. J. Allsop; 10 a.m., "Collagen Disease", Dr. T. M. Greenaway; 10.45 a.m., "Rheumatic Fever", Dr. Bryan Dowd; 11.45 a.m. to 12.15 p.m., question time.

#### Week-End Course in Psychosomatic Medicine.

The Post-Graduate Committee in Medicine in the University of Sydney announces that the following week-end

<sup>1</sup> *Lancet*, 1956, 2: 215.

<sup>2</sup> *Brit. M. J.*, 1954, 2: 375; 1955, 2: 1041.

<sup>3</sup> *Post. Grad. M. J.*, 1958, 34: 329.

<sup>4</sup> *Lancet*, 1956, 2: 1175.

course in psychosomatic medicine will be held in Sydney on Saturday and Sunday, November 22 and 23, 1958, under the supervision of Professor W. H. Trethowan. The fee for attendance at this course is £3 3s.

Saturday, November 22: In the Scot Skirving Lecture Theatre, Royal Prince Alfred Hospital. Chairman, Professor W. H. Trethowan. 2.15 p.m., introduction, Professor W. H. Trethowan; 2.25 p.m., "Psychosomatic Problems in General Practice", Dr. H. M. Merrington; 3.15 p.m., "Thyrototoxicosis and the Anxiety State", Dr. K. S. Harrison; 4.15 p.m., "Psychological Management of Ulcerative Colitis", Dr. Earle Williams and Dr. D. C. Maddison.

Sunday, November 23: In the Scot Skirving Lecture Theatre. Chairman, Professor W. H. Trethowan. 10 a.m., "Psychosomatic Aspects of Hypertension", Dr. Ian Simpson; 11 a.m., "Emotional Factors in Eczema: Their Significance and Management", Dr. E. J. C. Molesworth; 11.45 a.m., "Common Sexual Disorders in General Practice": (i) "Impotence", Professor W. H. Trethowan, (ii) "Frigidity/Dyspareunia", Dr. D. C. Maddison. In the Broughton Hall Psychiatric Clinic. Chairman, Dr. K. S. Harrison. 2.15 p.m., case demonstrations and discussion, Dr. John Ellard; 4.15 p.m., panel discussion, "Any Questions", chairman, Professor W. H. Trethowan; panel, Dr. John Ellard, Dr. K. S. Harrison, Dr. D. C. Maddison, Dr. H. M. Merrington and Dr. E. J. C. Molesworth.

#### Information.

Those wishing to attend the above courses should make early written application, enclosing remittance, to the Course Secretary, The Post-Graduate Committee in Medicine, 131 Macquarie Street, Sydney. Telephones: BU 4497-8.

## Notes and News.

### The Nestlé and Guilgoz Fellowships.

The International Children's Centre, Paris, has sent the following information about two research fellowships.

The first is a research fellowship of one million francs, awarded every year by the French Nestlé Company to a physician who wishes to specialize in the field of nutrition. The second is a fellowship to promote nutritional research founded by the Guilgoz Works.

Both of these fellowships for 1959-1960 will be awarded in the spring of 1959. Applicants are requested to send to the International Children's Centre, Château de Longchamp, Bois de Boulogne, Paris XVI\*, the following: (a) a curriculum vitae setting out their work on the biological and social problems connected with feeding or nutrition of infants and children; (b) a letter of introduction from one of their masters; (c) a description of the studies they wish to pursue with the help of the fellowship applied for. The applicants must have a sufficient command of the French language. At the end of the fellowship period, the Fellow or Fellows will be expected to send to the International Children's Centre a scientific report on the subject which they will have studied during the year.

### International Congress of School and University Health.

The French Association of School and University Health Services is organizing an International Congress of School and University Health on July 6, 7 and 8, 1959. This congress follows those which took place in 1947 and 1952, and will be held in Paris. It has already been granted the patronage of the Ministry of National Education. School doctors, doctors concerned with student services, paediatricians, phthisiologists, neuro-psychiatrists, psychologists, health service assistants and school nurses, educators, professors, instructors, specialists in problems related to children and youth, and all who are interested in questions concerned with health and medical services in schools and universities are cordially invited to attend the congress.

UNESCO has agreed in principle that the work of the congress may take place in its new buildings in Paris, thus assuring all facilities necessary for film showings and simultaneous interpretation. The organizers of the congress hope that the topics on the agenda will encourage contributions from participants from numerous countries. For

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED AUGUST 23, 1958.<sup>1</sup>

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism .. ..	2	3(2)	8(1)	..	..	..	..	..	13
Amoebiasis .. ..	..	..	..	..	..	..	..	..	..
Ancylostomiasis .. ..	..	..	..	..	..	..	7	..	7
Anthrax .. ..	..	..	..	..	..	..	..	..	..
Bilharziasis .. ..	..	..	..	..	..	..	..	..	..
Brucellosis .. ..	..	..	1	..	..	..	..	..	1
Cholera .. ..	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus) .. ..	..	1(1).	..	..	..	..	..	..	1
Dengue .. ..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile) .. ..	2	10(10)	12(8)	..	..	..	..	..	24
Diphtheria .. ..	1	1(1)	..	..	1(1)	..	..	..	3
Dysentery (Bacillary) .. ..	..	..	1(1)	1(1)	..	..	1	..	3
Encephalitis .. ..	..	1(1)	..	..	..	..	..	..	1
Filariasis .. ..	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice .. ..	..	..	..	..	..	..	..	..	..
Hydatid .. ..	..	..	..	..	..	..	..	..	..
Infective Hepatitis .. ..	79(24)	8(5)	6(2)	5(3)	6(5)	..	2	2	108
Lead Poisoning .. ..	..	..	..	..	..	..	..	..	..
Leprosy .. ..	..	..	..	..	..	..	..	..	..
Leptospirosis .. ..	..	..	1(1) <sup>a</sup>	..	..	..	..	..	1 <sup>a</sup>
Malaria .. ..	1	2(1)	2(1)	1	..	..	..	..	6
Meningococcal Infection .. ..	..	..	..	..	..	..	..	..	..
Ophthalmia .. ..	..	..	..	..	..	..	..	..	..
Ornithosis .. ..	..	..	..	..	..	..	..	..	..
Paratyphoid .. ..	..	..	..	..	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..	..	..
Poliomyelitis .. ..	1	1	..	..	..	..	..	..	2
Puerperal Fever .. ..	..	..	1(1)	..	..	..	..	..	1
Rubella .. ..	..	24(16)	..	3(3)	114(99)	1(1)	..	6	148
Salmonella Infection .. ..	..	..	..	2(2)	..	..	..	..	2
Scarlet Fever .. ..	20(7)	23(17)	8(2)	3(2)	5(3)	1(1)	..	1	61
Smallpox .. ..	..	..	..	..	..	..	..	..	..
Tetanus .. ..	..	1(1)	1(1)	..	..	..	..	..	2
Trachoma .. ..	..	..	..	..	2(1)	..	..	..	2
Trichinosis .. ..	..	..	..	..	..	..	..	..	..
Tuberculosis .. ..	13(9)	16(13)	21(8)	10(6)	4(1)	2(1)	..	..	66
Typhoid Fever .. ..	..	..	..	..	..	..	..	..	..
Typhus (Flea, Mite- and Tick-borne) .. ..	..	..	..	..	1(1)	..	..	..	1
Typhus (Louse-borne) .. ..	..	..	..	..	..	..	..	..	..
Yellow Fever .. ..	..	..	..	..	..	..	..	..	..

<sup>1</sup> Figures in parentheses are those for the metropolitan area.

<sup>a</sup> Source of infection outside Australia.



this purpose, speakers may use one of the five following languages: English, French, German, Italian, Spanish. Their remarks will be translated simultaneously into English and French. Those wishing to present contributions or to participate in the conference should write immediately to Dr. Delthil, Secretariat du Comité d'Organisation du Congrès, 13, rue du Four, Paris (6°).

#### Reconstructive Nasal Surgery.

The department of oto-laryngology of the College of Medical Evangelists and the department of oto-laryngology of the University of Southern California School of Medicine, Los Angeles, jointly will present an intensive post-graduate course in "Reconstructive Surgery of the Nasal Septum and External Nasal Pyramid" at White Memorial Hospital, Los Angeles, from January 6 to 16, 1959. The course will be under the guest direction of Dr. Maurice H. Cottle, professor of the department of oto-laryngology, Chicago Medical School, and with the cooperation of the American Rhinologic Society. There will be lectures, surgical demonstrations, anatomical exercises, seminars and case presentations. Special emphasis will be placed on the newer concepts of nasal anatomy, embryology and physiology. Further information may be obtained from Dr. Leland House, 435 South Soto Street, Los Angeles 53.

#### Glebe School Centenary.

The Centenary of Glebe School, N.S.W., will be honoured by a week of celebrations, commencing from November 3, 1958. All ex-pupils and teachers are asked to communicate immediately with the Organizing Secretary, 35 Concord Road, Strathfield, N.S.W. (UM 6434).

#### Bibliography on Staphylococcal Infection.

The National Library of Medicine has compiled a lengthy bibliography on staphylococcal infection, which, it is hoped, may be of value to both private and public health physicians who are engaged in combating the increased incidence of antibiotic-resistant staphylococcal infection in the home, community and hospital. The bibliography will be sent at no cost on request to the National Library of Medicine, 7th Street and Independence Avenue, S.W., Washington 25, D.C., U.S.A.

### Medical Practice.

#### NATIONAL HEALTH ACT.

The following notice is published in the *Commonwealth of Australia Gazette*, No. 48, of August 28, 1958.

#### NATIONAL HEALTH ACT, 1953-1957.

#### Notice in Pursuance of Section 134A.

Notice is hereby given that the Medical Services Committee of Inquiry for the State of New South Wales, after investigation, having reported on the thirtieth day of July, 1958, concerning the conduct of Bernard Richard Ingram, of 131 Bruncker Road, Adamstown, a medical practitioner, in relation to his provision of medical services under Part IV of the National Health Act, 1953-1957, I, Donald Alastair Cameron, Minister of State for Health, did on the thirteenth day of August, 1958, reprimand the said Bernard Richard Ingram.

Dated this thirteenth day of August, 1958.

DONALD A. CAMERON,  
Minister of State for Health.

### Nominations and Elections.

THE undermentioned has applied for election as a member of the Victorian Branch of the British Medical Association:

Strang, Robert Philip, M.R.C.S. (England), 1940, L.R.C.P. (London), 1940, M.R.C.P. (London), 1946, 14 Dunraven Avenue, Toorak, Victoria.

### Deaths.

THE following deaths have been announced:

CAMERON.—Stewart Lloyd Cameron, on August 20, 1958, at Cocos (Keeling) Islands.

GILL.—Hubert Baldwin Gill, on August 22, 1958, at Perth.

BURNS.—Hugh Matheson Burns, on August 26, 1958, at Perth.

CRAWFORD.—Harold Crawford, on August 31, 1958, at Buderim, Queensland.

### Diary for the Month.

SEPT. 15.—Victorian Branch, B.M.A.: Finance, House and Library Subcommittee.

SEPT. 16.—New South Wales Branch, B.M.A.: Medical Politics Committee.

SEPT. 17.—Victorian Branch, B.M.A.: Demonstration at Pathology Department.

SEPT. 18.—Victorian Branch, B.M.A.: Executive Meeting.

SEPT. 18.—New South Wales Branch, B.M.A.: Branch Meeting.

SEPT. 19.—New South Wales Branch, B.M.A.: Ethics Committee.

SEPT. 23.—New South Wales Branch, B.M.A.: Hospitals Committee.

### Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales. Anti-Tuberculosis Association of New South Wales. The Maitland Hospital.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

### Editorial Notices.

ALL articles submitted for publication in this Journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of the article. The abbreviations used for the titles of journals are those adopted by the Quarterly Cumulative Index Medicus. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors submitting illustrations are asked, if possible, to provide the originals (not photographic copies) of line drawings, graphs and diagrams, and prints from the original negatives of photomicrographs. Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary is stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this Journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

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